SELECTIONS

FROM

THE RECORDS

OF

THE MADRAS GOVERNMENT.

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No. XVI.

MEMORANDUM ON SALT.

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MEMORANDUM.*

Rise and Progress of the Monopoly.

1. The question of originating a Salt Monopoly in the *Madras* Presidency was first mooted in a letter to Government from the Board of Revenue dated 2d September 1799.

2. Previous to this, a Monopoly had existed in *Bengal,* which itself had been preceded by other systems.

3. On the acquisition of the Dewany of Bengal Behar, and Orissa, (August 1765), the inland trade in Salt* was vested in an exclusive Society, who were, in fact, the leading Servants, Civil and Military, of the Company, including the Governor General.† The profits, after paying a considerable duty to Government, were annually divided, and this was considered a compensation for the small salaries received from the Public Treasury. In 1766 the price of Salt wholesale, was 200 Rupees per 100 Maunds. This system continued till the end of 1768. The trade was

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* The "*Maund*" spoken of in this Memo is the Indian Maund of 3200 Tolas, or $82\frac{2}{7}$ lbs. Avoirdupois. 27·219 Maunds = 1 Ton, and 100 Maunds = 3·674 Tons. The Garce is 400 Salt mercals of $828\frac{1}{3}$ Cubic inches each, or 19·1744 Cubic feet. The weight of a Garce of Salt is taken on an average at exactly 120 Indian Maunds, or 4·4083 Tons, or $9874\frac{2}{7}$ lbs.

By the term "*Depot*" is meant the platform, or sets of adjacent platforms, where the salt is stored in 10 Garce heaps.

By the term "*Retail Sales*" is meant the prices at which salt is sold by the Dealers, at different distances from the place of manufacture, in contra-distinction to the Wholesale, or monopoly price.

The "*Fusly,*" or Agricultural year commences on the 12th July. Fusly 1260 begins 12th July 1850, and ends 11th July 1851. Fusly 1262 commences 12th July 1852, and so on.

The "*Northern Circars*" are the Districts of Ganjam, Vizagapatam, Rajahmundry, Masulipatam and Guntoor.

The "*Jagheer*" is the District of Chingleput, granted to the Company in 1765 by the Nawab of the Carnatic.

† Fifth Report page 22.

then thrown open; but Regulations were framed with a view to prevent monopolies being formed by Capitalists. In 1772, it was determined that all Salt should be made for the Company, and the different Salt *khataries* or Depôts were farmed out; the renters being obliged to sell the Salt at a fixed price. In 1780, the Salt manufacture and sale was taken entirely into the hands of the Company, who appointed Salt Agents, and a fixed price was settled and made known at the commencement of every season. At the end of the 18th century, the Salt revenue in Bengal was about 45 lacs of Rupees.

4. During this period, the only Salt-producing Districts belonging to the Company, in *Madras*, were the Northern Circars, and the Jagheer. It seems to have been the practice to rent out the salt pans.

5. On the 27th July 1795, the Board of Revenue issued Circulars to the Salt Districts, requiring a statement of the price of Salt at the Pans, and the expenses of Shipping, Freight &c.

6. Just at this time, viz. on the 1st August 1795, the Government transmitted to the Board of Revenue copy of an order of the Bengal Government, dated 3d July 1795, authorizing Bengal built vessels to bring, on "Permit," as much as 4 lacs of maunds of Salt, from the Northern Circars, for which they would receive from the Bengal Government 57 Sicca Rupees per 100 Maunds, of 82 Sicca weight to the Seer.

7. On receiving the replies to their Circular of 27th July, the Board informed Government, 12th October 1795, that, to obtain 8 per Cent profit, 57 Rupees was too little. (From the Collectors' replies it appears the price at the pans was about 24 Rupees a Garce). The matter then appears to have dropped.

8. In para 455 of their Report dated 2d September 1799, the Board of Revenue urged *the introduction of a Monopoly,*—similar to that in Bengal; but, at this time, it was a matter of consideration if a monopoly could be established, as long as the Rajah of Tanjore and the Nawab of the Carnatic had the power of keeping the manufacture and sale free in their Territories. The Board in their Report calculated that the population of the Districts then under their control was about 10 millions, and the consumption 12 lbs. a year to each soul, equal to 120 million lbs., or 12,000 Garce, weighing 10,000 lbs. per Garce. They observed that the price was 12 Pagodas (42 Rupees) per Garce, in the town of Madras; but the average along the coast, 6 pagodas and 6 fanams (Rupees 21, annas 7, and

pice 6). They valued the consumption at 73,600 Pagodas, (2,57,600 Rupees), of which the Government share would be 40 per Cent, or 29,440 Pagodas (1,03,040 Rupees) per annum.

9. The Board proposed that the Meerassee* cultivators should make Salt in future for the Company only, and receive in payment a sum equal to the average of what they had hitherto received when making it on their own account.

10. The Monopoly price was proposed to be 30 Pagodas (105 Rupees) per Garce, and the expected amount of sale annually, for home consumption alone, was estimated at 3,60,000 Pagodas or 12,60,000 Rupees, being a tax of 1 Fanam $40\frac{9}{16}$ cash (or 2 annas within a fraction) per head.

11. The Board anticipated sales beyond the Home consumption, and expected a Revenue "adequate to meet a considerable portion, if not the "greatest part, of the increased expence of the proposed Judicial De-"partment" (para 467).

12. The Board also threw out suggestions for increasing the manufacture of Salt on the coast, and exporting it to Bengal; believing that it could be sold there at a less price than what was then charged in that Presidency. They understood that the "cost and charges" to the Bengal Government was Rupees 70-1-2 per 100 maunds, whereas Coast Salt could be delivered on "permit" at 57 Rupees, and "on contract" at Rupees 67-14-2.

13. In reply to the above Report, the Bengal Government, on the 31st December 1799, informed the Government of Madras that, as the Treaty with Tanjore† had since been ratified, the difficulty of introducing a Monopoly was so far lessened; and they had reason to believe an arrangement might be made with the Nawab of Arcot‡ to relinquish the manufacture of salt within his Territories. Under these circumstances the Bengal Government authorized that, in forming the "Permanent Settlement," the exclusive right of manufacturing Salt should be preserved to the Company.

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* Hereditary occupants of the Soil.

† By which the Company obtained possession of the Carnatic.

‡ By the subsequent Treaty of 1801 the Company acquired the territory of the Nawab of Arcot also.

14. They did not however coincide with the views of the Revenue Board, as regarded supplying Bengal with coast salt, as they believed that thereby the "large Revenue, now realized with so much facility in "Bengal, might be materially injured."

15. In promulgating Regulation XXV. of 1802 for the "Permanent Settlement" in the Presidency of Madras, it was declared (Section IV.) that Government reserved to itself the exclusive right of manufacture and sale of Salt.

16. On the 29th September 1802, the special Commission forwarded a Circular to the Collectors of Salt Manufacturing Districts, enclosing Abstracts of the Board's Report of 2d September 1799, and of the Bengal Government orders of 31st December 1799, and requested them to give their views as to the best method of introducing the Monopoly. They were especially directed to state "the mode by which the manu-"facturers receive the return of their labors, and whether such return "be made in a money payment, in payment by kind, or, by the com-"mon wages of labor; because, it being the intention to receive into the "hands of Government the exclusive possession and sale of all salt, it "will be necessary to make a commutation of all payments in kind for "an equivalent in money."

17. The replies to this Circular do not contain much information. They are from Mr. Murray, Collector of Vizagapatam; Mr. Churchill, Collector of 1st Division of Masulipatam; Mr. Skinner, of 2d Division; Mr. Cazalet, of 3d Division; Mr. Parish, Collector of Southern Péshcush in Ramnad and Tinnevelly; Colonel Read, in the Northern Division of Canara; Mr. Ravenshaw, in the 2d Division; and Mr. Stratton in North Arcot, as Collector of Western Polygar Péshcush. No mention is made in these replies of Manufacturers' Meerassee rights. In Canara, the lands yielding salt were stated to be private property, but the Collector did not think that would prevent Government claiming the right of taking, at a fixed price, the salt produced thereon. In the Northern Circars, the manufacturers were paid money; in Tinnevelly, in kind. Opinion varied as to the Monopoly, but Mr. Stratton was the chief opposer. No salt however was *manufactured* in his District. From the statements enclosed, it appears that in the Northern Circars the price of Salt was 8 to 10 Pagodas*

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* 28 to 35 Rs.

a Garce. In Ramnad and Tinnevelly, from 2 to 5 Pagodas;* and in Canara, about 13†; in North Arcot, 25 to 30 Pagodas, (having to be brought from the coast).‡

18. On the 6th October 1803, the Board issued another Circular, with a Draft Regulation, for levying *a Duty* on Salt, and asking which would appear to be preferable—that or a Monopoly.

19. The replies to this were generally vague, but the majority of those addressed preferred the Duty to a Monopoly.

20. On the 28th June 1804, the Board reported to Government, that the replies of the Salt District Collectors to their Circulars of 29th September 1802, and 6th October 1803, had been received, with regard to establishing a Monopoly, and the result they came to was, that "the measure could not be adopted with regard to the salt of "Foreign Settlements, and that much difficulty would attend the adjusting a fair compensation to the Meerassidars &c., whose rights were to "be resumed." They preferred "the levy of a high Duty equivalent to the intended Monopoly price." With respect to the difficulty as regarded the Meerassidars, they quoted Mr. Stratton's (Collector of Western Péshcush) reply to their Circular of September 1802, para 26, where he says that to give the Meerassee cultivators a price for their salt, equal to the *usual average*, would not be fair, when the selling price came to be raised to 30 Pagodas. The Collectors in general preferred a fixed Duty to a Monopoly; and the Board forwarded a Draft Regulation§ to that effect. By this, persons desirous of manufacturing salt, would have had to take out a Permit, and register the number of Pans on which they proposed to manufacture. Chokies would have been established, where Duty would have been levied on salt coming from Danish, Dutch, and French Settlements. The amount of Duty would have been left to be fixed by Government; but the Board thought 30 Pagodas a Garce too high to commence with. All salt, exported by sea, should, they thought, be exempt from duty. In the previous Fusly 1212,‖ the Revenue was as follows:—Gross Receipts, 2,21,607 Rupees; and Charges of Establishment, 11,467 Rupees.

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* 7 to 17½ Rs.

† 45½ Rs.

‡ 87½ to 105 Rs.

§ Appendix A.

‖ July 1802 to July 1803,

21. Mr. Falconer recorded a Minute* of Dissent, being opposed to a Duty and in favor of a Monopoly. He urged that, "the permanent system of Revenue recognizes no proprietary rights as inherent in Meerassidars,"† and for Government to grant to Meerassidars, or Cultivators, a fair price for the full extent of their salt would be a just compensation. He stated that Government had already, in framing Regulation XXV of 1802, reserved, in all Zemindaries, the Revenue arising from salt; and as to the Meerassidars alluded to by the Board, "they "are the native hereditary manufacturers of salt, or inhabitants with the "conditional occupancy and usufructuary privilege of lands in which "salt is manufactured by laborers hired for the purpose." He denied that these Meerassidars had any more claims than the Zemindars, who had been divested of their rights, to the salt. He further stated, that the objections of Mr. Stratton did not refer to the question of a Monopoly so much as to the raising the selling price from 7 or 8 to 30 Pagodas.

22. As to competition of Foreign States, a Frontier Duty could be levied on all salt passing out of their Territories.

23. He urged the Government to introduce the same system (*i. e.* a Monopoly) as in Bengal. He proposed that the quantity to be manufactured be limited, and an Agent be appointed to superintend this branch of Revenue. He adverted to the Board's estimate of consumption, 12 lbs a head, and to the Native calculation of 1 seer of salt to 30 seers of rice every month, or 12 seers a year, which he considered exaggerated. He assumed 9½ lbs, which, he remarked, was near the Bengal rate (9 lbs). The sale prices at the pans he stated to be about Pagodas 6, Fanams 6, per garce. He proposed to add to this, 20 cash a seer, or Pagodas 28, Fanams 24, per garce of 4800 seers‡. As the cost of manufacturing salt in Bengal was so great, he proposed to supply a large quantity from the Coromandel coast.

24. On the 29th August 1804, the Government approved of the plan for a Monopoly; and it was sanctioned by the Bengal Government, 4th July 1805.

25. On the 22d August 1805, the Board submitted the Draft of a Regulation, which was subsequently passed on the 13th of

* Appendix B.

† The Salt Revenue, he says, had been hitherto not above 63,000 Pagodas (2,20,500 Rs.) Gross, and 44,000 Pagodas (1,54,000 Rs.) Net.

‡ Total Pagodas 34, Fanams 30, or Rs. 121 5 6.

September, as Regulation I of 1805; regulating the Revenue derivable from salt, and establishing a Monopoly of that article. Malabar and Canara were excepted. The Monopoly price was fixed at 20 Pagodas,* or 70 Rupees, per garce.

26. On the 10th July 1807, the Salt Monopoly was extended to Malabar and Canara, under Regulation II of 1807.

27. Peviously to the enactment of Regulation I of 1805, the annual Revenue derived from salt was about 80,000 Pagodas, or 2,80,000 Rupees. The Table C, will shew its progress from 1805 to the present time.

28. The administration of this branch of Revenue was originally vested in the Collectors alone, under Section XXXII, Regulation II of 1803, but they were by Section IV (clause 1st) of I of 1805, placed in communication with a General Agent, who was under the orders of the Board of Revenue.

29. On the 12th May 1808, or towards the close of Fusly 1217, the office of General Salt Agent was abolished, and a Commission of 1½ per cent on the salt Revenue was granted to the Collectors and their Head Assistants, in the proportion of two-thirds to the former and one-third to the latter.

30. The fall in the Revenue, in Fusly 1224, was owing (according to the Board's Proceedings 31st May, 1812) to the Court having abolished the Commission to Collectors and their Assistants.—On its restoration in Fusly 1227, (A D 1817) the Revenue rose. In March 1818, Regulation II of that year was passed, which imposed an import Duty of 100 Pagodas (350 Rupees) per Garce, on all salt imported by Sea from territories out of the Presidency. Salt was still prohibited to be imported by land, except under special sanction. (Section IX Regulation I of 1805). Regulation II of 1818 was rescinded by Section II, Act VI of 1844.

31. All Commission to Collectors and their Assistants on extra sources of Revenue was abolished in 1836. (Vide Board's Circular Order of 5th May, 1836.)

32. The Board, however, on the 18th April, 1822, (para 5), attributed the falling off in Fuslies 1224—27, to the abuses that had crept

* Subsequent fluctuations in the monopoly price will be seen in Appendix C.

into the Department, especially extensive frauds in Nellore and Guntoor. Commissioners were appointed in Fusly 1227, to investigate these, and their detection served to revive the Revenue.

33. On the termination of this Commission,* the Board, on the 31st May 1819, prepared a set of detailed Rules for the management of the salt Revenue, which were approved by Government, and remained in force till the 31st December 1850, when a revised set of Rules were drawn up by the Board, and published in page 546 of their printed Circular Order Book.

34. On the 2d September 1853, the Government (under sanction of the Government of India) notified that the Import duty on salt imported by Sea, which was 3 Rupees per Maund, under Schedule A of Act VI. of 1844, should be reduced to 12 Annas per Maund.

MONOPOLY PRICE OF SALT.

35. It may not be uninteresting to trace the changes that have taken place in the Monopoly Price of salt, with reference to the Table in Appendix C.

36. The Monopoly price was at first fixed at 20 Pagodas, or 70 Rupees, per garce.† In 1809 it was raised, at the recommendation of the Board of Revenue‡ to 105 Rupees, at which it continued till 1820, when it was reduced, by order of Government, to the former price of 70 Rupees per garce, on the ground that the increase had led to a great diminution in the consumption. The Board of Revenue§ replied that, in their opinion, the people had not been deprived to the extent that the decreased sales appeared to shew, inasmuch as salt, in large quantities, found its way into the market from over-measurement, illicit manufacture, &c., and to check which, they had framed their late Salt Rules. They recommended a gradual reduction of price, and that it should be reduced, in the first instance, to 25 Pagodas (or 87½ Rupees) per garce.

37. The Government, in reply, considered that the fact of the people being driven to illicit practices was in itself a proof that the price was too high; and that, if the price was kept up, improved management, by diminishing the chances of smuggling, must lead to

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* Messrs. Vaughan and Anstey's Report of 14th October 1818.

† Board's Report, 27th February 1809.

‡ From Bd. 10th Oct. 1819, To Bd. 20th March 1820.

§ From Board 3d April 1820.

reduced consumption, and a greater use of Earth salt; they therefore adhered to their resolution.

38. On the 22d February 1822, the Board of Revenue submitted a Minute of their Senior Member, Mr. Cochrane (in which they concurred), advocating an increase of the price to 30 Pagodas, or Rupees 105, per garce, on the ground that the actual consumption could not be judged of by the Account Sales, much salt yet finding its way to the market illicitly: they stated that the reduction of the Monopoly price was felt only on the Coast, and did not benefit the great bulk of the consumers resident in the Interior, the *retail* prices not being affected materially thereby.

39. The Government* on this, requested information regarding the retail prices.

40. On the 30th August 1824, the Board again addressed the Government, stating that they still considered that the price should be raised again to 105 Rupees per garce, but that they would await the result of further trial.

41. On the 21st April, and 8th May 1828, the Board proposed, with a view to save the expense of carriage, that the salt intended for the consumption of Madras, should be put up, periodically, to sale by auction, to the highest bidder beyond the monopoly price; importation into Madras being allowed from other Districts. This suggestion was negatived by the Government, on the ground that it would press on the poorer class of retail dealers, and might create a sub-monopoly; and that the reason for proposing it was a reason for raising the monopoly price at once.

42. On the 12th June 1828, the Board resumed the subject of the monopoly price, and pointed out that the Government had been led into an erroneous conclusion in 1820,† as to the diminution of consumption. The accounts laid before Government showed only the gross Revenue in money, and this had been divided by 105, the Monopoly price in Rupees per garce, to shew the number of garces; but it was overlooked that those accounts included not only the Home and Inland sales, but also those for Exportation at greatly reduced prices. If a

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* To Bd. 15th March 1822.

† See Para 36 of this Memorandum.

calculation were made, excluding from both periods the "*Exports,*" such calculation would show an *increase* in consumption of 21 per cent, when the high prices prevailed.

43. The Board then referring to the prices ruling in the interior provinces, came to the conclusion that the reduction did not benefit the mass of the people; for while Government had given up 35 Rupees per garce, the prices in the interior had, on the average, only fallen about 22 Rupees; and that, under any circumstances, the quantity consumed by a Native family was not such as to make the higher rate a hardship to them, and that trade with Foreign States had not suffered. The Board also expressed themselves averse to any difference being made in the Monopoly price, with a view of equalizing the retail price at different places.

44. The Government* acquiesced in the reasoning of the Board, and the price was again raised to 105 Rupees per garce.

45. The result of this change of price was reported on by the Board of Revenue in 1831,† when it appeared that the *quantity* sold had decreased, by 4,505 garce in 1828, and by 2,530 garce in 1829, as compared with the average of 1820 to 1826, while the *revenue* from the increased price was higher in 1828 by Rupees 8,26,358, and in 1829 by Rupees 10,60,217.

46. In 1844‡, when the Transit duties were abolished, the Government of India with a view to meet the loss of Revenue, directed that the Monopoly price of Salt should be raised from 105 to 180 Rupees per garce, or from 14 Annas to 1½ Rupees per maund, contrary to the recommendation of the Government of Madras in favor of fixing the price not higher than Rupees 127½ per garce, which was considered sufficient to meet the loss of revenue. The Honorable Court,§ on a consideration of the arguments urged by this Government, and the regular decrease of consumption which followed each increase of price, directed the Monopoly rate to be reduced to 1 Rupee per maund, or 120 Rupees per garce, its present amount.

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* To Bd. 20th June 1828.

† Bd.'s Pro. 1st Sept. 1831.

‡ From Bengal 15th Sept. 1843. Ex. Min. Cons. 14th Dec. 1843. To Bengal 14th December 1843. Ex. Min. Cons. 26th Mar. 1844.

§ Court's Despatch 3d July 1844.

47. In 1848 the subject of the monopoly price was again noticed by Government,* in consequence of the Court of Directors† having ex. pressed their apprehension, that the former increase of price from 70 to 105 Rupees had placed salt beyond the reach of the people, or else that smuggling, and the use of Earth salt had increased; and that the evil had now been aggravated, by raising the price from 105 to 180 Rs. per garce.

48. The Board, having received the opinions, and details of sales, from the different Collectors, forwarded, with their Report‡ to Government, a Statement exhibiting the sales of salt from Fusly 1216 (A. D. 1806). The sales increased when the price was lowered from 105 to 70, and fell when the price was raised to 105; but, latterly, the sales were coming up to those of the highest period. This, the Board observed, was probably owing to improvements in the local means of communication, the abolition of the Sayer, and greater efficiency of management.

Monopoly price. Rs. per Garce.	*Fusly.*	Sales. *Garce.*	Sales. *Maunds.*
105	1228	28,113 =	33,73,560
	1229	28,442 =	34,130,40
70	1234	40,357 =	48,42,840
	1235	42,810 =	51,37,200
	1236	37,646 =	45,17,520
105	1238	34,724 =	41,66,880
	1239	36,699 =	44,03,880
	1240	33,935 =	40,72,200
120	1256	38,231 =	45,87,720
	1257	38,294 =	45,95,280

49. Another statement exhibited the average *Retail Prices* of salt in each District, during the different periods at which the monopoly rate differed. It tended to shew that the consumer was not made to pay in proportion to increased rate of Monopoly price, but that the loss, whatever it might be, fell on the trader.

50. The *consumption per head*, was variously stated by the Collectors, but 6 measures (about 18 lbs.) seemed to the Board a fair average. At this rate a Population of 20 millions should consume 37,500 garce, whilst the total sales, including *Foreign territory*, averaged only 38,064 per annum, for the 3 Fuslies 1255, 1256, 1257.

51. If a family, the Board observed, is supposed to consist of 6 persons, the consumption thereof in a year (36 measures) would, at 120 Rupees, be Rs. 1, A. 5, P. 7; a sum approaching one month's wages of the poorer laborers.

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* E. M. C. 4th April 1848.

† Despatch dated 31st December 1847.

‡ 4th July 1850.

52. A reduction in the present rate, they thought, did not seem necessary, if suggested only on the ground of its height causing a *decrease of Revenue* in comparison with past years. For, as below:

Monopoly price.	*Fusly.*	*Retail prices, (average.)*		Average Sales.		Revenue.
Rs.		Rs.	A.	*Garce.*	*Maunds.*	Rupees.
70	1234 to 1236	130	5	 39,464	= 47,39,280	... 27,64,580
105	1238 to 1252	157	9	 34,725	= 41,67,000	... 36,46,125
120	1255 to 1257	182	10	 38,064	= 45,67,680	... 45,67,680

On the other hand, considering the evil of smuggling, and the inconvenience to the people, the Board were of opinion that the Government price should be as low as possible. The present rate 120 Rupees, they added, had not been yet in operation 5 years, which was too short a time to give a decided opinion as to its effects.

General Mode of Manufacture.

53. Salt in the Madras Presidency is manufactured by solar evaporation. In the interior, a relatively trifling quantity is made privately by lixiviation from Saline soils (and is known as "Earth salt"); but this, except where permitted in a few instances, is contrary to the Regulation establishing the Monopoly (I of 1805).

Places of Manufacture.

54. The places of manufacture by solar evaporation, are certain localities along the line of the Coromandel coast, determined on generally as being the old grounds previous to the Monopoly, and sometimes fixed with reference to the convenience of the community. It is however considered more desirable to extend the manufacture at one place, than to open a new ground. The more numerous the localities, the greater the risk of smuggling, and the greater the expense of the Establishment.

Extent of Land capable of yielding Salt.

55. The whole line of Coast from Ganjam to Cape Comorin is available for salt manufacture. It is not possible to state the exact extent of land occupied by salt pans, as few of them have ever been measured; but there is no doubt that there is sufficient salt ground to supply the whole of India, if required. Perhaps 12,000 acres may be assumed as the

total area now occupied by salt pans in work in the Madras Presidency.

56. The salt is manufactured from the saline water of the Backwaters, or salt inlets that abound along the coast. Small channels are cut from the inlet, and the water is baled up by the Native pacottah into shallow reservoirs made by banking up the ground; and when the brine has, after some days, acquired a certain degree of strength, or saltness, it is let off into still shallower banked-up enclosures or "pans," where the earth has been made hard by stamping. Here it is allowed to evaporate, and the salt scraped off. Brine is then again let in, and another coating of salt is scraped off, and so on, for 12 or 15 times according as the weather permits.

57. In some few places, pits, or shallow wells are excavated in the earth, near the sea, and from which the water is drawn off, instead of baling from creeks and inlets.

DETAILS OF MANUFACTURE OF SEA SALT.—PLAN OF SALT PANS.

58. The method of manufacturing salt in the Pans near Madras, was explained by the Collector, Mr. Ogilvie, in his letter to the Board of Revenue, dated 2d December 1820. The following year Mr. Angelo, his Assistant, was desired to make more minute investigation, and submitted, on the 23d July 1821, a very detailed, though not a very lucid Report. He points out, however, that Mr. Ogilvie's descriptions (which were taken from what the Meerassidars told him) were in some instances quite incorrect.

59. Major De Havilland, the Inspector of Civil Estimates, reviewed Mr. Angelo's paper, and committed his opinion to paper, in a Report, which will be found in the Appendix.* It is necessary however to observe that Major De Havilland seems to be in error in supposing (para 31) that the Ennore pans, of one cawney, produce nearly 20 garce. The "statement" he refers to is not to be found in Mr. Angelo's Report. 20 garce may have been the out-turn from one *holding*, combining several Pans or Ullums.

60. These Reports refer to two methods, the one used at Attiput, and the other at the pans of Trivatore, Sadiencoopum and Ernavoor, which have long been discontinued, partly on account of their indifferent yield, and partly because they were so close to the Town of Madras that smuggling could not be checked.

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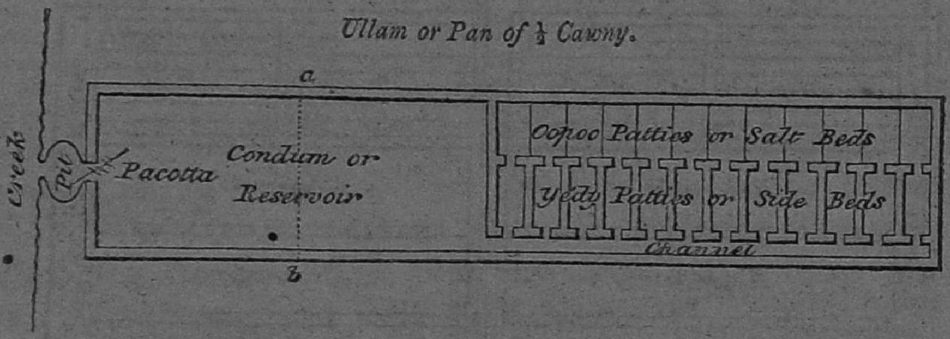
* Appendix D.

61. The Attiput pans continue, and the method there adopted may be considered as the type of all, though few are *exactly* alike. For instance, a man may hold several ullums or pans. Instead of making a Reservoir, Water-beds, &c., for each ullum, he combines the whole, and makes one or two large reservoirs, and one or two large water beds do for all. The same area of reservoir &c., will be required in proportion, but the expense of making so many embankments is saved. It is to be remembered that in the Area termed Pan, or Ullum, is included not only the "Evaporating beds" from which salt is scraped, but the reservoirs and side-bed channels, which in fact occupy the greater part of the pan.

62. The following may be considered as the usual method of laying out a Pan, in the vicinity of Madras, subject, of course, to variations.

63. An Ullum held singly, is about ½ a cawny, or 28,800 square feet, or ⅔ of an acre.



64. A pit or excavation is made at the side of the creek or backwater, from which, by the native pacottah, water is baled out into the Condum or Reservoir, which occupies half the Ullum.* During very strong winds, to prevent the too great agitation of the water which might endanger the banks, a temporary bank is run across from *a* to *b*; and near *b* a hole is opened to keep up the communication between the two parts of the reservoir. The bank of the reservoir is about 18

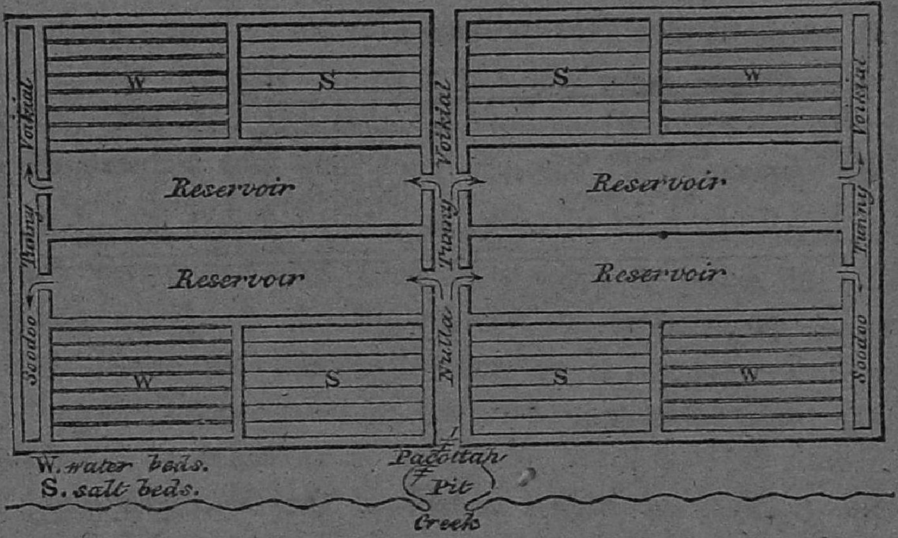
* This Reservoir is not *excavated*, but is on the level of the adjacent ground. It, as well as the rest of the ullum, is well stamped down and as smooth as pavement.

inches high, and 12 thick. The water within stands about 12 inches deep. From this the water is let off, when required. into a narrow channel not 2 feet wide, which supplies the 12 *yédy patties,* or "side water beds." The banks separating these from each other are made 2 or 3 feet wide, and on them, the salt after scraping, is heaped up to dry, before conveying to the Depôt.

65. The water beds are separated from the 12 *Oopoo patties* or "salt beds", in which salt finally deposits. Each of these 12 "salt (or evaporating) beds," is subdivided by a narrow ridge of a couple of inches. These 12 beds together occupy $\frac{1}{4}$ of the ullum. (or in this instance, $\frac{1}{8}$ of a cawnie, or $\frac{1}{8}$ of an acre).

66. Where several ullums are held by one person, or by partners, the arrangement is something like the following:—The centre or main channel is the *Nulla-tunny kāl* or good water channel. Hence it passes into the Condum or Reservoir, and thence into the *Soodoo-tunny kāl* or warm* water channel: Hence into the water beds, and from them to the salt beds.

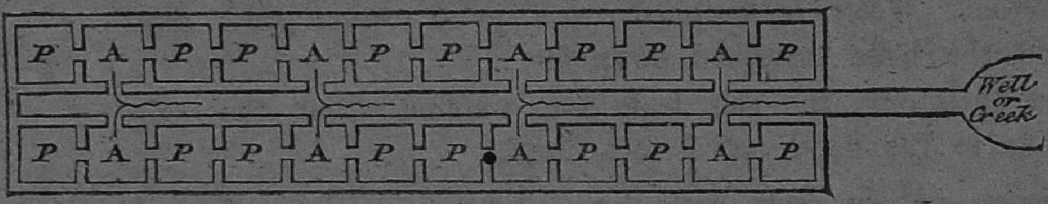
Another Pacottah is worked here if water is to be had.



* The natives speak of the more concentrated brine as being *warmer.*

67. In some few ullums, a long way from the sea, when the creek is influenced by fresh water, as many as three Condums or reservoirs are used; each of a different degree of concentration; the last communicating with the side beds. They are called respectively Nulla-tunny—Soodoo—and Kāram, or concentrated.

68, In each District there is some variety as to the arrangement of the ullums. For instance in Tanjore the arrangement is as follows:—



The Sea water is pumped by a pacottah from the salt water inlet into a channel supplying first the divisions marked A, which are reservoirs. After the brine is concentrated, it is let off right and left into P, P. The reservoirs are called *An-pattie*, or male-bed, the pans marked P, are called *Pen-pattie*, or female bed.

DETAILS OF PROCESS OF MANUFACTURE NEAR MADRAS.

69. The following is the process at the *Attiput* pans for preparing the ground, and manufacturing the salt. The pans are supposed to have been used before. Work commences early in January.

	Days.
Clearing out the pit near the backwater, into which the pacottah works, banking it with sods, clearing the channel into the condum or reservoir, ...	2
Before the condum is quite completed, the "Water beds" are irrigated by a *temporary* channel, levelled, and slightly pressed, ...	3
Repairing banks and ridges, ...	2
The salt beds, or "Oopoo Patties" have water let on, and are levelled. This takes, ...	2
Stamping and treading down the salt beds, ...	8
Salt beds left to dry, ...	7

	Days.
Ridges of salt beds repaired and put in order, ...	2
The Condum or Reservoir is now attended to, and smoothed with a short plank placed across the end of a plough, acting like a plane,...	4
The temporary channel is now filled up, the regular channel to the water beds (or Yédapatties) is made, and water is baled into the reservoir by the Pacottah till it stands 6 inches deep. This takes	2
The "water beds" now receive a direct supply from the reservoir. Water is supplied to 2 or 3 inches each day, and the beds smoothed down for...	2
On the 35th day, the salt beds are watered from the side beds to the depth of 1 inch for,...	2
The floors of the salt beds are plastered with mud and smoothed with the scraping board, ...	1
Salt beds left to dry, and white sand sprinkled over, which is trodden in with the feet and smoothed with the scraper. This takes	2
N. B.—During the last 5 days the *Condum* or Reservoir receives a supply of water morning and evening.	
Four inches of water are let off from the Reservoir by the channel into the *water beds;* the Reservoir being supplied afresh,...	1
Two inches of water are let off from the *water beds* into the salt beds, the water beds being replenished from the Reservoir, and that again by the Pacottah,...	2
The water in the salt-beds is allowed to concentrate, and then replenished as before, ...	3
The same as above, ...	3
The salt beds are allowed to dry, and are smoothed down with the scraper. This takes	2
Three or four inches are admitted into the salt beds, ...	1
The water in the salt beds is allowed to condense, till crystals of salt form, ...	6
Days.........	58

70. The salt is now scraped up as it settles at the bottom of the water, with a plank at the end of a pole, like that used on macadamized roads in wet weather. After each scraping of salt is finished, the scraper is used again but with more violence, and the slime is pitched over into the "water beds" which draw out the salt from it. Four or five inches of water are then let in again to the salt beds, and allowed to condense as before, till the salt falls. Every time brine is let on to the salt beds, the water beds are replenished by the channel from the Reservoir, and the Reservoir by the Pacottah.

71. The first 5 scrapings are considered poor, the rest good. There may be about 21 Scrapings, if July is pretty dry, and the manufacture continued from January to the end of August, or say, 7 months.

72. In each of the 12 salt beds (see plan above given) of a ½ Cawny Ullum, the scrapings in a fair season should be about as follows.

1st Scraping.........	1	Mercal.
2nd do.	2	do.
3rd do.	4	do.
4th do.	6	do.
5th do.	10	do.
	23	
16 Scrapings at 12 Mercals each	192	Mercals.
	215 × 12 = 2580	
	G. M.	
	or 6 180	

73. This is the yield of an *old* pan properly worked. The *average* of old and new, worked in the ordinary way, gives about *half* the above, or 3¼ garce per ½ cawny ullum.

74. Mr. Angelo, in his Report of 2d December 1820, states the average of the old Attiput pans to be garce 4, mercals 35.

75. Long continued land-winds cause the salt to deposit in flakes, which, on being handled, crumble to a fine powder. Easterly winds are more favourable to crystallization; and in southerly winds the crystals are of large size. The above effects are easily accounted for, by the relative dampness of these winds; crystallization being more perfect, the slower the Evaporation.

76. The red or brown colour of some kinds of salt is owing to the wind driving the dust into the pans, or to the rough method

sometimes used in scraping, or raking up the salt, by which a quantity of dirt is scraped up with it.

77. In some localities the salt is allowed to evaporate to dryness on the surface of the ground, before it is taken up. In this case, the salt is apt to be bitter, in consequence of the muriates of lime and magnesia being precipitated with the chloride of sodium. If the salt is raked up whilst the water is yet over it, the muriates will probably remain in solution, and the salt will be brought out pure.

78. For some useful hints on the manufacture of salt, Major De Havilland's paper* may be consulted.

SWAMP SALT.

79. In some localities, such as Vadāniem in Tanjore (near point Calymere) and in the neighbourhood of the Town of Masulipatam, there are vast tracts of low swampy saline ground where almost any quantity of salt can be produced. This is generally known as "spontaneous salt." No reservoirs or pans are required; for at high tides, the sea is allowed to flow over the level earth, and its return is prevented by quickly throwing up small banks: the enclosed water is then allowed to evaporate. Should the demand for salt increase, the manufacture at these places could be easily extended.† At present it is more convenient for the Traders to have several places of sale than to be obliged all to resort to one spot. The ground at Vadaniem also is inconvenient of approach in the present state of inland communications, and not near any large Town where Traders are likely to come.

80. In Ganjam, swamp salt is found in hot seasons, and has occasionally been collected and sold on account of Government, at 60 Rupees a garce.

81. In Rajahmundry, it is found along the Coast. It was formerly collected and sold with Government salt, but latterly, it has been destroyed.

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* Appendix D.

† At Masulipatam, the average annual quantity of salt manufactured in the 10 years ending with July 1853 is as follows:

	Maunds.
Manufactured salt,............................	21,680
Spontaneous or swamp salt,......................	41,399

In Tanjore, the Vadāniem Cotaur, which is supplied by Swamp salt, receives about 20,000 maunds.

82. In Nellore, swamp salt is found; when it is of a good quality, it has sometimes been collected and sold on account of Government. Cost of manufacture about 4 Rupees a garce.

83. In the northern part of the Chingleput District, near Streeharicottah, swamp salt was once collected at a cost of 6 Rupees a garce, and sold the same as Sea salt, on account of Government. It was said to have been of inferior quality, and the collection and sale were discontinued.

84. In Tinnevelly, swamp salt is plentiful, but it is always destroyed.

85. The mode of destroying swamp salt is generally by treading it down with cattle. The facilities for smuggling seem to be the chief objection to manufacturing it.

EARTH SALT.

86. The manufacture of "Earth Salt," is carried on more or less in every District, especially in Bellary, Cuddapah, and Kurnool; where, from their great distance from the Coast, Sea salt is greatly enhanced in price. In these Districts it has been permitted by Government, and a tax levied, in some places of manufacture (called Moolahs or Modahs), under the head of "Moturpha." As the manufacture of Earth salt generally is carried on secretly, and the salt sold privately, or else consumed by those who make it, it is quite impossible to state to what extent it affects the salt Revenue, though it no doubt *does* affect it. It is made in large quantities in the independent State of Poodoocotta, between Tanjore and Madura, and smuggled into the Company's territories. In Canara, the manufacture of Earth salt in the neighboring country of Mysore is very extensive, and seriously injures the trade in Sea salt. The Collector is of opinion that a reduction in the Monopoly price, and improved roads, is the only way to check this; as the large number of persons in Mysore who now consume Earth salt would then consume Sea salt. The subject of the 'Earth Salt' in Bellary, Cuddapah and Kurnool, was reported in the Proceedings of the Board of Revenue, under date 19th October 1848. There are in Bellary about 2,800 recognized Modas paying a tax, producing about 1,100 garce, and carried to account under Moturpha, of about 13,000 Rupees annually. The manufacturers sell it at about 100 Rupees a garce.

87. In Cuddapah, the Collector supposes about 384 garce of Earth salt consumed yearly, but only 48 garce is manufactured in the District of Cuddapah, the rest being brought from Bellary. No tax is

levied on it. The selling price in the Bazar is from 100 to 133 Rupees per garce; the cost to the original manufacturer is from 10 to 24 Rupees per garce.

88. In Kurnool the manufacture is very limited, but it is not prohibited. The amount of tax levied is under 400 Rupees, and is carried to the head of Moturpha.

89. The process of manufacture is detailed in the Appendix.*

90. The Board of Revenue having been called on for their opinion, proposed to extend the tax into Cuddapah in preference to Licensing or Farming out. The Government were not inclined to alter the present rules, and referred the subject to the Court of Directors. The Court in reply desired to be further informed as to the nature and quality of the salt, and a very careful analysis of different specimens of Earth salt from Bellary, Cuddapah and Kurnool has just been completed by Dr. Mayer, Professor of Chemistry at the Medical College.† He has also undertaken to analyze various specimens of Sea salt as found selling in the Bazars at Bellary and Cuddapah. It appears that there is nothing deleterious whatever in the Earth salt; and when it is considered how many people consume it, and how many more consumed it in former years, when there was little or no trade with the coast, the idea of its being unwholesome must be exploded. It originated probably with zealous servants of the Company, who wished to depreciate what was not monopoly salt.

91. In other Districts besides those named above, Earth salt is made so clandestinely, that it is not possible to ascertain the quantity, or selling price. In some places the earth mixed with water is placed in a vessel of pottery with a small hole and a cotton wick at the bottom, through which the saturated brine percolates: this is then evaporated to dryness over a fire.

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* Appendix E.

† Copy of Dr. Mayer's analysis of Earth salt is given in APPENDIX F. An analysis of ten specimens of Earth salt from the Ceded Districts gave on an average,

Moisture,..	7
Sand and dirt,..	5
Chloride of Sodium,..	81
Bases and Acids,..	7
	100

The acids and bases shewed (qualitatively) Nitrates of Potash, or Soda, or both, "but too insignificant to act in any other way than as a slight stimulant to the Renal Organs."

OUT-TURN OF SALT PANS.

92. It is not possible to state with certainty the out-turn of Sea Salt manufactured by solar evaporation on a given area. Every thing depends on the season: a fall of rain a few days earlier or later may make a difference of two or three hundred per cent in the produce.—Soils also differ; some retain the salt much better than others. The mode of manufacture also differs, and at the best it is defective. The manufacturers receive so much per garce from Government, and as they are generally (especially to the South) paid at a very high rate, they do not exert themselves beyond what is sufficient to find them in what they consider the sufficiencies of life.

93. About Madras the out-turn of a "pan" may often be ascertained; but then, again, a pan held separately must contain its own Reservoir; whereas, if a man has several pans, he can make one Reservoir answer for many, and thus save more space for the actual production of Salt.

94. About Madras a pan of ½ a cawnee that has been a few years in use (for new pans) will produce in a good year 5 garce.* The actual out-turn is however very much less. No doubt a person holding several pans and introducing a more scientific system of manufacture would obtain double, or 20 garce a cawney, or 15 garce an acre, if the season was dry.

MALABAR AND CANARA.

95. The above remarks do not altogether apply to Malabar and Canara. No salt is manufactured in the former District. The Malabar salt failed to secure purchasers when the Bombay salt came into the market, and the manufacture died off in 1823. Vide Appendix.† The supply for Malabar is all brought by sea from Bombay, by merchants, who contract to land a certain quantity for a certain sum;‡ and this is retailed by Government

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* A garce is 120 Indian maunds of 82$\frac{2}{7}$ lbs. avoir, or 9,874$\frac{2}{7}$ lbs. avoir., 4·408 Tons.

† Appendix G.

‡ The prices contracted for of late years have been as follows, per garce:—

Fusly.	Canara.			Malabar.		
	Rs.	As.	P.	Rs.	As.	P.
1257	19	7	7	24	2	2
58	21	15	10	37	5	11
59	26	5	6	32	13	7
60	19	5	9	23	15	6
61	22	0	3	27	14	7
62	24	13	4	32	7	10

at their Depôts. In Canara, most of the salt consumed is manufactured in the District,* but some is imported, as in Malabar, from Bombay, by contract. Under the Government Notification of December 6th, 1853, private individuals are at liberty to import salt by sea into several Ports (specified) of Canara, Malabar and other Districts; but no advantage had, in April 1854, been taken of this, either in Canara (though it was expected) or any where else. Previously, under schedule A. of Act. VI of 1844, salt was liable to an Import duty of 3 Rs. per maund. Salt is also brought in by land from Goa, on payment of a duty of 12 annas per maund. The respective quantities of salt, and their revenue for the last 3 Fuslies, in Canara, are shewn below. Fusly 1262 ended July 11th, 1853.

	Fusly 1260.	Fusly 1261.	Fusly 1262.
	Mds. Rs.	Mds. Rs.	Mds. Rs.
Purchased from Bombay... ...	86,125 = 13,888	1,19,691 = 21,950	1,20,723 = 24,980
Manufactured in Canara ...	398,382 = 37,881	4,05,638 = 37,361	4,31,454 = 39,352
Imported from Goa on Duty...	39,765 = 29,825	44,268 = 33,207	64,147 = 48,113

96 The quantity of Salt manufactured and sold at every Cotaur† in the Presidency for Fusly 1262, ending July 11th 1853, is shewn in the Appendix.‡

MANUFACTURERS—WHO THEY ARE,—THEIR RIGHTS AND PRIVILEGES.

97 The persons who manufacture the Salt are socially in the same position as the ordinary village Ryots,§ but in general they are, or ought to be, in better circumstances, inasmuch as a Salt pan is more valuable property than an ordinary grain land occupancy of the same extent. These people are the descendants or heirs (often by purchase of their rights) of the Manufacturers who were found so occupied when Government assumed the Monopoly. Previous to the Monopoly, the Salt producing grounds were farmed out, or rented, like other lands, in the Northern Circars, but, in the Carnatic, the Salt produce, or its value in money, was divided between the Circar and the cultivator. On assuming the Monopoly, the Government recognized in the Carnatic a "Meerassee," or private

* Appendix H.

† The term Cotaur is used to mean one set of pans under a separate Establishment.

‡ Appendix I.

§ They are by no means in the debased state which (whether true or not) the Molungees of Bengal are described to be in. Their labour is entirely voluntary, and the climate of the coast where they work, exceedingly healthy.

property in the soil, and allowed the Salt ryots their share (Coodeewarum) at a much higher rate than they ever had before,* and pledged themselves to give them some compensation† in case the pans then at work were discontinued by order of Government, unless the propriety of closing arose from misbehaviour on the part of the Meerassidars, or from their not manufacturing a requisite quantity. They have however never been called on to manufacture as much as could be made.‡

98. In opening new pans, a written agreement is entered into with the manufacturers, by which they admit the right of Government to close the works when they please, without "compensation."

RATES OF COODEEWARUM, OR PAYMENTS TO MANUFACTURERS.

99. At Masulipatam, cooly laborers are hired by Government,§ but with this exception the salt manufacturers are in the possession of what are considered valuable rights and privileges, more so, perhaps, in the Southern Districts and in Canara,|| than in the Northern Circars, as in the latter, meerassee right was not acknowledged, and the rate, paid per garce,¶ is not liberal.

100. Every Proprietor of a pan is registered;* and when Government extend the manufacture at any one locality, the preference is usually given to the villagers to take up the pans, but if they cannot do so (for some expense is required at first) the Government dispose of the pans to whom they please. Persons having pans, but refusing to manufacture, or only giving in a quantity far below the proper yield, are liable to have their pans taken away. A salt pan thus becomes real property, and as such is disposed of by sale or otherwise.

* The rates varied according to the class of persons who held the land; whether Bramins, Residents, Strangers, Pagoda people, Enamdars &c., so that several rates sometimes prevail in one Cotaur.

† Cl. 1st Sec. V. Reg. I of 1805. The whole amount of compensation "now paid is only about 3000 Rs. per annum. There are however old Roosooms" or perquisites now paid in money, amounting to 5000 Rs. per annum. See Clause, 2d, Section IV. Reg. I of 1805.

‡ Sec. VI. Reg. I of 1805.

§ The Collector is now introducing a system of contract.

|| Sec. II. Reg. II of 1807. This regulation makes no reference to "compensation" in Canara and Malabar.

¶ Fixed payment per Garce to the Manufacturers.

Ganjam, from 5 to 6 Rupees.—Vizagapatam 6 Rupees; Rajahmundry 5½ to 6½ Rupees; Masulipatam Coolies at 2 As. per diem; Guntoor 7 Rupees; Nellore 7½ Rupees; Chingleput 6 to 24¾, average 12 Rs. 6 As; South Arcot 6¼ to 14¾, average 10 Rupees nearly; Tanjore 10 Rupees; Madura 10 Rupees; Tinnevelly 7 Rupees; Madras 10 Rupees; Canara 7 to 12 Rupees; Malabar, (purchased from Bombay).

* Clause 3d Sec. IV. Reg. I of 1805.

SEASON FOR MAKING SALT, AND GENERAL ARRANGEMENTS OF MANUFACTURE.

101. The time for commencing the preparation of the pans is the beginning of January. Previous to this the Collector of the district arranges how much salt is required to be made that season, and the pans are apportioned out accordingly; each man engaging to supply a certain quantity, which is generally less than what he *could* manufacture. Advances are occasionally given to the manufacturers, but the system is discouraged.

ADVANCES.

102. The amount advanced for Fuslies 1258 to 1262 inclusive, for each district is shewn below:

TUCCAVY, OR ADVANCES.

NAMES OF DISTRICTS.	Fusly 1258.	Fusly 1259.	Fusly 1260.	Fusly 1261.	Fusly 1262.
Ganjam,..................	200	650	350	500	800
Vizagapatam,..............	2,230	1,828	3,034	3,315	3,498
Rajahmundry,..............	3,073	2,531	2,531	3,562	5,917
Masulipatam,..............	8,492	9,200	1,300	3,322	9,059
Guntoor,..................	2,300	3,500	1,700	2,625	4,275
Nellore,..................	780	490	680	725	835
Chingleput,................	,,	,,	,,	,,	3,500
South Arcot,..............	1,200	500	700	937	950
Tinnevelly,................	,,	,,	,,	,,	1,000
Madura,....................	10,983	,,	,,	7,715	,,
Total.....	29,257	18,699	10,295	22,702	29,834

103. The first scraping of salt takes place some 5 or 6 weeks after the commencement of operations in preparing the pans, and successive scrapings take place at intervals till about July, when the rains generally put a stop to the manufacture. The season occasionally is such that the manufacture is carried on till September.—Details have been given in para 58.

104. In the Southern Districts, the scraped salt is heaped up by the side of the salt pans, and when dry, is removed to Depôts close by. There it is measured and placed on raised platforms, in 10 garce heaps, each covered with thatch.* In the Northern Circars the salt is allowed to remain some months in drying yards, before storing at the Government Cotaurs, but

STORING.

* In Canara and Malabar the humid climate renders it necessary to have more substantial store-houses.

considerable reform in this and other details has lately been introduced by the Commissioner. In Canara and Malabar, the Bombay-made salt is stored at localities on the coast; and also at depôts, a short way up the navigable rivers; but in all other districts there are no depôts, except close to the pans. Here all the salt manufactured is stored, and here the purchasers must come to buy.

MADRAS DEPÔTS.

The town of Madras is however an exception. The pans have no roads near them passable for carts, and the sales are so extensive that a large gathering of traders, close to the place of manufacture, would encourage smuggling. The salt from the pans near Madras is brought from distances, varying from 6 to 10 miles, by Cochrane's canal,* to the Grand Central Depôt near the S. W. wall of Black Town. This arrangement is far more convenient for purchasers, as the salt is sold chiefly to parties who have brought goods from the interior to Madras for sale, and who generally rendezvous close to the Depôt. They can thus load their carts as soon as they have completed their sales, without the delay and trouble of going some miles to the salt pans. A second Depôt is however established close to the Beach at Ennore, 10 miles north of Madras, for such salt as is purchased for export by sea. This depôt is some 3 miles from the Ennore pans, and the salt is brought by boats.

105. The manufacturers are paid for their salt (at the fixed rate per garce)†, as soon as it has been measured into the Government depôt. Each manufacturer has his quantity brought in separately; and an individual account is kept of what he has supplied, though each man's supply is not stored separately. All wastage, previous to its measurement at the depôt, is at the loss of the manufacturer. He is not paid for every garce he *makes*; but for every garce brought to the depôt.

106. The Monopoly price, or rate at which salt is sold, at the depôts along the coast, is 1 Rupee per maund, or 120 Rupees per garce.‡ This was fixed by order of Government dated 15th August 1844.

SALE OF SALT AT THE DEPÔTS.

107. The sale is free to every body, and Salt can be bought at the above rate in as small

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* Government property.

† Para 99.

‡ The changes of price have been adverted to in paras 35 to 52 of this Memo.

quantities as 5 mercals, or $1\frac{1}{2}$ maunds. In some instances the Board have authorized sales of 1 maund, or $3\frac{1}{3}$ mercals. Again, persons willing to take a 10 garce heap *as it stands*, are allowed to have it at 5 per cent less, *i. e.* at 114 Rupees per garce instead of 120; and at Madras a considerable quantity is sold in this way. It saves Government the expense and delay of measuring. In consequence of Section XLIII of Act VI of 1844, specifying the rate of sale per *maund*, it is the practice to weigh the salt exported by sea, but in all other instances it is *measured;* the "Mercal" being considered equivalent to $\frac{3}{10}$ of a maund. Some discussion took place on this subject, which will be adverted to in the Appendix.*

SALT SOLD BY MEASURE.

108. The persons who come to the Depôts for salt to supply the neighbouring districts, are people of the Country. Those who purchase salt to convey to a far distance, or to Native States, are Lumbadies or Brinjarries, a wandering race of petty traders in grain and salt, who possess large herds of cattle, and convey the salt away on these, or on donkeys. The channels from the Godavery, lately opened, afford a convenient mode of transport by boats in the Delta of Rajahmundry; and if the Godavery itself were made navigable, a vast trade in salt would probably be opened into the cotton country of Berar. At present the Nagpore Territory is chiefly supplied from Ganjam, but it is a scanty trade, owing to the difficult nature of the country.

PURCHASERS OF SALT—WHO.

109. The Nizam's Territories are supplied chiefly from Guntoor, Masulipatam and Rajahmundry. As the inland Roads and Canals improve, the present miserable traffic must give way to a carrier trade on carts or in boats, and the prices of salt in the interior will fall. In the Town of Madras, the purchasers of salt for the Inland Districts are (as before said) parties who bring goods to Madras, such as Cotton, Indigo, Sugar, Oil, Ghee, Firewood &c. Their carts rendezvous at a locality close to the Salt Cotaur, and to the Grain market, and as soon as their goods are disposed of, the dealers load their return carts with salt; for this is about the only article for inland exportation from Madras.

DEALERS' SELLING PRICES, OR AS THEY ARE COMMONLY CALLED, "RETAIL PRICES."

* Appendix J.

110. The prices in the interior press considerably on the poorer classes, and it is generally calculated that, for every mile, one Rupee is added per garce to the Monopoly rate.*

	Rs. per Garce.		Rs. per Garce.
Ganjam, ...	165	Tanjore, ...	152
Vizagapatam, ...	143	Salem, ...	218
Rajahmundry, ...	135	Coimbatore, ...	224
Masulipatam, ...	153	Trichinopoly, ...	159
Guntoor, ...	154	Madura, ...	161
Nellore, ...	161	Tinnevelly, ...	155
Cuddapah, ...	218	Malabar, ...	173
Bellary, ...	251	Canara, ...	145
Chingleput, ...	163	Madras,...	167
North Arcot,... ...	159	Monopoly price, ...	120
South Arcot, ...	162		

111. The marginal statement will shew the average rate at which salt is sold in each district, when not purchased at the depôt. The average of the three last years is taken.

112. Dr. Mayer, Professor of Chemistry, has drawn up a very interesting paper† on the analysis of 22 specimens of sea salt taken from the bazars of 22 towns and villages in the Cuddapah District (averaging 100 miles from the nearest salt cotaurs, and about 150 or 160 by road). The specimens, being dried at the temperature of boiling water till they ceased to lose weight, averaged as follows :—

Moisture,..	7	per cent.
Sand and dirt,..................................	3	,,
Chloride of sodium or pure salt,.........	89	,,
Muriates of magnesia and lime,...........	1	,,
	100	

If the salt had been *perfectly dry*, 89 parts out of 93, or 95½ per cent, would be *pure* salt.

113. With reference to the high retail price at Madras, where there is a Central Depôt at hand, it is necessary to note, that the transactions from whence the Return of prices are framed, are of, and calculated from, very small sales per *measure*. In Black Town it is 9 pice a measure, or 150 Rupees a garce; at St. Thomé (4 miles distant, yet still in the collectorate of Madras), 11 pice, or 183½ Rupees per garce.

IN WHAT CASES SALT IS SOLD UNDER THE MONOPOLY PRICE. (MALABAR.)

114. The Monopoly prices have under the orders of Government, 9th March 1852, been lowered at certain depôts in Malabar‡ along the Cochin Frontier. The prices have been fixed at $9\frac{2}{12}$ Annas, and $13\frac{9}{12}$ Annas, in consequence of the low rate, at which salt sells in Cochin,

* Appendix V.

† Appendix K.

‡ It is only in Malabar and Canara that there are Depôts, anywhere except on the coast, or at the place of manufacture.

and the Cochin Government have agreed not to lower their rates till the close of Fusly 1264 (July 12th 1855).

SALT SUPPLIED TO FRENCH SETTLEMENTS.

115. The next instance in which salt is sold under the Monopoly rates, is that furnished to the French Government under the Convention* of 13th May 1818, by which the British Government are bound to supply what is required for French consumption at the cost price. The French agreeing to sell it at English Monopoly price. The *average* annual shipments, and the prices are as follows:

	Maunds.	Price per Garce.
From Rajahmundry to Yanam,...........	1,500—	6 Rs.
From South Arcot to Pondicherry........	30,000—	8 and 14½ Rs.
From Tanjore to Karical,..................	12,500—	13 Rs.
From Malabar to Mahé,...	1,000—	At the rate paid in Malabar for Bombay Salt.
	45,000	

116. The charges of sea conveyance are shared between the two Governments. In South Arcot, out of the 30,000 maunds supplied, 3,340, or 11 per cent only, is taken from the cheaper pans of Keelay, as the salt is inferior and chiefly used for curing hides. The Mercanum salt is highly esteemed. Its higher price arises from the Coodevarum at those pans having been originally fixed so high as 11 Rupees, whilst at Keelay it is 7¼. The moiety of shipping charges above the sums mentioned, is Rs. 5—6—0 from Mercanum per garce, and Rs. 2—13—0 from Keelay.

SALT EXPORTED BY SEA.

117. The next instance in which salt is sold under the Monopoly price, is in the case of Exportation by sea.

118. It has from a very early period been the object of the Madras Government, to induce the Bengal Government to supply themselves from Madras, as there is little doubt salt might be landed in Calcutta, even after paying all charges (including establishment), at 10 Rupees a 100 Maunds, plus freight and wastage; which, altogether, would not, it is believed, equal the expense at which salt is now made in Bengal on account of Government. Reference has been made at the beginning of

* By the first and fourth articles of a former Convention 7th March 1815, it is stipulated that the British Government pay annually 4 lacs of Sicca Rupees for the right of purchasing at a "fair price" all the Salt manufactured in the French Settlements. A portion of this sum is paid in Madras and a portion in Bengal. By the Convention of 1818 the British Government agreed to pay 14,000 Rupees annually to the French Government on their ceasing altogether from the manufacture of Salt.

this Memo, to early discussions, as to the export of salt to Calcutta. It was allowed by Section XIX Regulation I of 1805, to be supplied either by Contract or Permit. In 1810 the annual supply for Bengal was fixed at 12 lacs of maunds, which, in 1814, was reduced to 5 lacs, and subsequently continued to vary according to the success or failure of the manufacture in Bengal. Exports take place under, what is called, "Government Indent" and "Private Trade." In the first case, the Bengal Government notify some months before-hand what salt they require. As soon as the Collectors have reported they are ready to supply it, the Ports* where it can be shipped, and the quantity at each Port is notified periodically in the Fort St. George Gazette, as also the terms on which ships may take it.

"GOVERNMENT INDENT" FOR BENGAL.

119. The Government Indent is either for salt required at, or near, Calcutta, or at *Chittagong*. The terms to shippers for Bengal, for several years, were as follows: The shipper to pay 35 Rupees per 100 maunds (the salt to be put on board at Government expense), and to receive from the Bengal Government 70 Rupees for every 100 maunds he landed. Salt for Chittagong is brought thither by contract made with the Bengal authorities. The contractor pays at Madras 25 Rupees per 100 maunds, and agrees to deliver it at Chittagong for 40 Rupees. The Bengal Government indent on the Madras Government, yearly, for the quantity they have arranged for; and it is all supplied from Nellore, the salt of that district being most in request. It is usually termed "Kurkutch salt."

GOVERNMENT INDENT FOR CHITTAGONG.

120. In 1845† the present rates were established for the Government Indent. The salt to be paid for by the shipper at 25 Rupees per 100 maunds, (Government to bear the cost of putting it on board,)‡ and the Bengal Government to pay 60 Rupees for every 100 maunds landed.

"PRIVATE TRADE" TO BENGAL.

121. The salt transactions for "Private Trade" are as follows: The different Collectors report, with reference to past demands, what they can put aside for private trade; and the quantities and localities are advertised in the Gazette.

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* They can hardly be called Ports; but the word has reference to the Roadsteads opposite the localities on the coast, where salt is stored. The Pans are generally close by.

† From Govt. to Board 13th October 1845, and Board's reply, 22d December 1845.

‡ The same as Salt for Chittagong.

The terms are, that any one is at liberty to ship salt at the places specified, on paying 15 Rupees per 100 maunds (Government putting it on board for this); the party being at liberty to sell it in Bengal on *his own account*, after paying the Import duty, in Calcutta, of 2½ Rupees a maund,* or 250 Rupees per 100 maunds. It must be taken only in vessels of 200 tons or more, and square-rigged, thus obliging them to take a Pilot on board in the Hooghly.†

122. It will be seen from the statement beneath that there has been no salt shipped on Government Indent for some years, (except to Chittagong‡ from Nellore), whilst the private trade has continued, though its extent has decreased.

EXPORTS TO BENGAL ON "GOVERNMENT INDENT" AND "PRIVATE TRADE."

Fusly.	Rajahmundry	Nellore.		Chingleput.	South Arcot	Tanjore.		Madras.		Total.		
	Private Trade.	Bengal & Chittagong Indent.	Private Trade.	Bengal Indent.	Private Trade.	Bengal Indent.	Private Trade.	Bengal Indent.	Private Trade.	Bengal Indent.	Private Trade.	Total.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
1254	....	2,56,869	... ...	56,220	....	... ...	... ...	1,77,847	... ...	4,90,936	... ...	4,90,936
1255	....	3,47,517	... ...	11,400	11,820	... ...	7,200	... ...	89,541	3,58,917	1,08,561	4,67,478
1256	29,400	3,14,610	20,100	....	3,600	... ...	5,880	... ...	51,760	3,14,610	1,10,740	4,25,350
1257	1,440	1,94,869	9,720	....	....	... ...	... ...	... ...	... ...	1,94,869	11,160	2,06,029
1258	53,600	1,59,750	12,000	....	....	... ...	8,160	... ...	1,59,528	1,59,750	2,33,288	3,93,038
1259	60,000	1,81,177	1,11,218	....	3,000	... ...	1,920	... ...	75,840	1,81,177	2,51,978	4,33,155
1260	25,000	85,286	14,200	....	15,840	... ...	... ...	... ...	1,11,050	85,286	1,66,290	2,57,576
1261	81,000	94,800	66,400	....	....	... ...	... ...	... ...	6,000	94,800	1,53,600	2,48,400
1262	19,916	... ...	55,650	....	3,000	6,000	1,800	... ...	11,700	6,000	92,066	98,066

CAUSES OF DISCONTINUANCE OF EXPORT ON "GOVERNMENT INDENT."

123. The following causes may be assigned for the discontinuance of the export on "Government Indent." First, the insufficiency of the rate of freight—25 Rupees to be paid, and 60 to be received, leaves 35

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* In 1841 the duty was 3¼ Rupees. In 1844 it was reduced to 3 Rupees, and in 1847 to 2¾ Rupees, and in 1849 to 2½ Rupees.

† This is a rule of the Bengal Government to prevent illicit imports.

‡ The Exports from Nellore have for late years been all to Chittagong.

rupees per 100 maunds—9½ rupees per ton,* whereas freight to Calcutta, except at particular seasons, generally is 15 Rupees per ton. It is, however possible that, if the Madras Government knew beforehand exactly what was required by the Bengal Government, and were authorized to invite tenders, parties would undertake the shipment of large quantities at a moderate freight. Secondly, the nature of the cargo. Salt is subject to great wastage at sea, and the Bengal Government only pay for what is landed. Salt also is stowed in bulk and is liable to shift and endanger the ship, and every vessel that has carried salt must be washed out (at some expense and delay) before she is fit to take a general cargo.—Thirdly, the obligation imposed on the shippers to pay for the salt. It is quite foreign for parties who are mere carriers, to become purchasers also, and sometimes a great inconvenience. Fourthly, the uncertainty as to the time the vessel will be detained by the authorities in Calcutta before they clear out the salt. On this subject no information can be given in Madras; and if a ship has a charter ready in Calcutta, the master is afraid lest any delay, on account of Government, should vitiate a profitable arrangement with other parties.†

PRICES AT WHICH THE BENGAL GOVERNMENT MIGHT BE SUPPLIED.

124. The Government of Bengal have formerly‡ expressed some surprise that they could not be supplied with salt at the same rate (15 Rupees per 100 maunds) as "Private Trade." The Board, as then constituted, did not seem disposed§ to furnish salt without receiving some clear profit for the salt revenue of Madras: but it was on this occasion that they agreed to make the price 25 Rupees. It had formerly been 35 Rs. The objection to supply Bengal at the same rate as private trade is no longer urged, but even then, as long as the sum remaining to cover freight was only 35 Rupees per garce, the same difficulties would present themselves to shippers, as exist now. It would also be necessary, as is indeed advisable with regard to "private trade," that the price should not be fixed invariably at 15 Rupees per 100 maunds; for in some places it can be supplied at less, whilst at Ennore and Covelong it hardly at all covers the expenses of manufacture. The price should be just what would clear this Government of *all* expense.

PRICE AT WHICH SALT CAN BE STIPULATED FLUCTUATES.

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* 100 maunds = 3 ⅗ tons.

† Since writing the above, a copy of letter from the Marine Board to Government has been sent to the Revenue Board office, and is transcribed in Appendix U.

‡ From Government to Board of Revenue, 18th October 1845.

§ From Board to Government, 22d December 1845.

PETTY TRANSACTIONS EVEN IN "PRIVATE TRADE" EXPORT TO BENGAL.

125. As to "private trade" it does seem that a larger export might be expected. The price at which salt can be landed in Calcutta by "private trade" is as follows, for every 100 maunds:—

Can be put on board on the coast for............	Rs. 15 per 100 maunds.
Freight, say 10 Rupees per ton or...............	36·7
	51·7
Import duty at $2\frac{1}{2}$ Rupees per maund..........	250
	301·7 per 100 maunds.

126. According to Mr. Worthington,* the expense from England would be—

Can be put on board at Liverpool for 13s. per ton or...	23·8 Rs. per 100 mds.
Freight at 25s. per ton or..............................	46·0 Rs. per 100 mds.
	69·8
Import duty..	250
	319·8 Rs. per 100 mds.

and even at this price it has *greatly* affected the Government sales;† and yet, when coast salt can be landed for 52 Rupees, less than a lac of maunds were imported against $29\frac{1}{4}$ lacs, chiefly from England, at 80 Rupees!

127. It is not easy to state the true cause of this. Much is owing, no doubt, to the fact of the salt, in England, being the private property of persons, who can supply any quantity—are men of capital—and anxious by every exertion to find a market. Whereas in India, it is more of a speculation, as the parties selling the salt have first to buy it, and convey it there in their own vessels, or take their chance of getting freight, which is very fluctuating at this port; and the mercantile connections of Madras and Calcutta are not so extensive as those between England and Calcutta.—15 Rupees per 100 maunds is (as said before) the least that the Madras Government can in general give the salt for, and put on board; though at some of

* Parliamentary Paper, 4th Report, Indian Territories 1853; page 183.

† A. D. 1841-42.

Government wholesale sales,... 39,59,336 | Imported Salt,.................... 6,12,691

A. D. 1851-52.

Govt. wholesale sales, ... 22,39,952 | Salt Imported,........................ 29,26,865

In these years the wholesale price of Salt in Calcutta was 323·44 Rs. per 100 maunds.

the Northern Ports, where the hire paid to the manufacturer is less, the figure might be reduced to 12 Rs. The expense of putting it on board, varies from 2 to 4 Rupees per 100 maunds, according to the distance of the Depôt from high water mark, and the facility of obtaining boats.

128. The following Abstract will shew the quantities of salt sold under different heads for the last 3 years:

	Fusly 1260.	Fusly 1261.	Fusly 1262.
	Ind. maunds.	Ind. maunds.	Ind. maunds.
For consumption in the Districts,....	22,57,031	23,82,859	23,66,353
For other Districts,..................	10,06,843	11,42,397	10,28,793
For Foreign States,...................	16,40,564	16,57,007	17,41,440
French Government,....................	63,831	39,390	58,128
Export by Sea,........................	2,51,576	2,48,400	92,066
Total......	52,19,845	54,70,053	52,86,780

DISTINCTION BETWEEN HOME AND INLAND SALES.

129. It is to be observed that in the account of "Sales" a distinction is made between (I) Home consumption and (II. and III.) Inland consumption. The former shews the sales for consumption within the district where the depôt is situated. The other the sales for other districts in the Madras Presidency, and for Foreign States. It might be supposed that from I. we should be able to obtain the consumption in any one district, and from II. and III. the consumption within the Presidency. But the fact is that the only means there are for distinguishing the sales is, the assertion of the purchaser: wherever he declares he is going to, is entered in the account—Now, as the Salt Merchants desire to have a Rowannah or Pass, for as many days as they can, they very often declare they are going to a distant district, and sell in the same, or declare they are going to Hyderabad, Mysore, &c., and sell within the Presidency. There is no means of checking this, as will be shewn when mentioning the subject of Rowannahs, and the consequence is, that the entries of sales for *Home, i. e.,* District consumption, are generally very much below the truth, though the Home Sales, and "other districts" sales together,* are nearer the mark. The quantity *sold*

"RETURNS OF SALES" NO GUIDE AS TO ESTIMATING THE CONSUMPTION.

* The sales (excluding those for Foreign States and Bengal) for the last 3 years have been as follows (see para 128).

	Mds.
Fusly 1260....................	32,63,884
do. 1261....................	35,25,256
do. 1262....................	33,95,146

Or, taking 34 lacs of maunds to a Population of 22 millions, would give 12·72 lbs. per head.

for consumption, even supposing the localities for which it is sold are correctly returned, is again very different from the real consumption; for more salt is consumed (through smuggling and illicit practices—to say nothing of Earth salt and Swamp salt) than is entered as *sold*.

CONSUMPTION OF SALT PER HEAD.

130. The consumption of Salt per head is a question requiring to be determined. The Board of Revenue, in their first Report on the subject of salt, on 2d September 1799, para. 462, state the Bengal estimate of consumption of salt per head per annum to be 9 lbs., but they assumed for Madras 12 lbs. Opinions have since varied, though it is believed 12 lbs. has been usually considered the Bengal estimate of late years.

131. In this Presidency it may be taken at 18 lbs., or 6 measures,* per head per annum, taking old and young, rich and poor together. It is not asserted that it *is* actually consumed, but it is about what *would be* consumed, if the price were not a hindrance.

132. Mr. Churchill, in his reply to the Board's Circular of 29th September 1802, states as follows:—"The natives have a mode of calculating the quantity of *salt* they consume in a month by the quantity of *Rice* expended in a day. Thus, they say, a family that consumes a mercal of rice per *diem*, will consume the same quantity of salt per *mensem*."

133. He then goes on to say, that the population of his District (Rajahmundry), "on an average, consume a seer of rice per day; and they will by the above calculation, which I believe pretty correct, consume (each) one *seer* of *salt per month*." Taking the seer at 2 lbs., this would give 24 lbs. a year.

134. On the same occasion, Mr. Ravenshaw, Collector of Canara, reported the consumption at 2 Rupees weight per diem to each individual, or 730 Tolas = 18 lbs. per annum.

135. The Collectors, whose Reports have lately been received, estimate the consumption differently; but on the whole, 18 lbs. cannot be far from the mark, though it may be said to represent rather what *would be* than what *is* consumed. It is some security for correctness, when, if several estimates are given in different terms, and these terms, being reduced to a common standard, are found to approximate in the result. Early estimates have been mentioned, and below will be found the estimates of the

* Strictly speaking, a "Measure, or $\frac{1}{3200}$ of a Garce, weighs 3·086 lbs."

different Collectors at present, after which will be given other sources of information, and the whole should be considered together.

	lbs. per annum.
Ganjam estimates at one seer in 50 days...... =	$14\frac{1}{2}$
Nellore estimates 9 seers............................ =	18
Chingleput estimates 6 to 8 measures.......... =	21
South Arcot estimates...............................above	16
Malabar estimates $3\frac{1}{4}$ Macleod seers............. =	$12\frac{1}{4}$

136. The following are deduced by dividing the "Home Sales" by the Population; but the Collectors of Vizagapatam,* Guntoor, Chingleput and South Arcot, specially notice that salt is sold *in the District* by traders whose Rowannahs are for *Inland,* and also, that parts of their District, bordering on other Districts, are supplied from the Pans of the latter, as being nearer. Consumption of Earth or Swamp Salt, and smuggling also, evidently affect the results.

	lbs.
Vizagapatam $1\frac{1}{2}$ seer... =	3
Guntoor $6\frac{3}{4}$ seers.. =	$13\frac{1}{2}$
Chingleput† 2 measures.................................... =	4
South Arcot‡ .... =	$4\frac{4}{16}$
Rajahmundry 7 seers... =	14
Masulipatam $3\frac{15}{16}$ seers... =	8
Nellore $8\frac{1}{2}$ seers.. =	17
Tanjore $69\frac{3}{4}$ Tolas a month.................................. =	$21\frac{1}{2}$
Madura..	$13\frac{3}{8}$
Canara $625\frac{1}{2}$ Tolas..	16

137. The Assistant Commissioner in the Northern Circars states as follows:§ "It was found by careful investigations of the quantity used in several native families of the *lower class* during the two last circuits, that the average per diem for each member was R. 1 As. 10 weight." This gives $15\frac{3}{10}$lbs.

138. A former Collector in South Arcot, whose attention was much given to this branch of Revenue, calculated the consumption at 25lbs.||

139. In his letter of 24th April 1854, the then Collector of South Arcot gives the population of Pondicherry and its adjacent territory at 96,716 souls; and they receive about 250 garce per annum from our Depôts. Of this about 20 Garce are used to cure Hides, the remainder, or 230 Garce

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* Reference is made by the Collector of Vizagapatam to the Proceedings of Commissioner Northern Circars, dated 19th May 1853.

† District adjoins Madras.

‡ Adjoins Chingleput and Tanjore.

§ From Assistant Commissioner, 21st April 1854.

|| From South Arcot to Board of Revenue, 19th October 1848, para. 6.

is supposed to be consumed in the French Territory. This would give 24lbs. per head.* Mr. Bishop, the Collector of Tanjore, in his letter of 20th October 1848, gave the consumption per head as between 2½ and 3 Rupees per diem. This gives an average of 25¾lbs.

140. It has also been ascertained, by reference to the Military Authorities, that a Sepoy on Foreign service, when rations are allowed him, receives 12 drams of salt a day, or 17lbs per annum. On board a ship, he receives 1 ounce a day, or 22¾lbs. per annum.

141. From all these estimates it may fairly be assumed, that 18lbs. per head per annum, or nearly 2 Rupees' weight per diem, is what would be the maximum consumption per head, if salt, was, from its price, within the reach of all to the extent they required:—but it would not be safe, perhaps, to calculate above 15lbs; as no doubt there is a tendency among those natives, who have been referred to, to consider more their own adult consumption, than that of children and paupers.

142. All the salt consumed in the Madras Presidency is indigenous, except that supplied to Malabar from Bombay, and that to Canara from Bombay and Goa.

143. The Import duty of 3 Rupees per maund, imposed by Schedule A of Act VI. of 1844, quite shut out Foreign Salt.† The Import duty was reduced, by sanction of the Government of India, at the end of the year 1853, to 12 Annas, or ¾ R. per maund.‡ Sufficient time has not elapsed to judge of the effect of this reduction, but it is not likely that English salt will be introduced.

144. Independent of any argument as to price, there seems to be (or *was* on the last occasion on which it was attempted) a great repugnance to English salt.

145. In 1846, an English ship brought a cargo of salt to Madras; and as, from other engagements, the owners were obliged to unlade the ship by even throwing the salt into the Sea, it was purchased by Government at 20 Rupees per garce. The native dealers made small purchases at reduced prices, but so strong a prejudice existed in the na-

* It is however to be observed, that great numbers of coolies are shipped from Pondicherry to Bourbon, and they have to be shipped with salt for the voyage.

† In 1849 Goa salt was admitted into Canara on a duty of 12 annas per maund, and so has continued.

‡ 75 Rs. per 100 maunds.

tive community against it, under the impression of its being impure, that ultimately it was made over to the Commissariat Department.

SALT REVENUE PROTECTED BY LEGISLATIVE ENACTMENTS.

146. The Salt Revenue is protected by the enforcement of the laws relative to that subject.

147. The Regulations and Acts relating to the Salt Revenue are, Regulation I. of 1805, Regulation II. of 1807, Regulation V. of 1831, Act VI. of 1844, Sections XLIII. XLIV. They seem sufficient for the purposes required. The first establishes the Monopoly on the Coromandel Coast, and specifies the rights of the manufacturers,—the penalties of a breach of certain laws laid down—the rules regarding Import and Export—the issue of Rowannahs and Permits—rules under which seizures are to be made.—Regulation II. of 1807 extends the monopoly to Canara and Malabar in a few words.

148. Regulation V. of 1831 directs that those penalties which, under Regulation I. of 1805, were to be sued for by Civil process should be recovered by Criminal process, and gives authority to Magistrates (and Collectors are Magistrates in this Presidency) to take primary cognizance of such offences, and commit, as in other cases of breach of the salt laws; the maximum punishment by the Criminal Court being 200 Rupees fine, or two years imprisonment.

149. Act XVII. of 1840 gives Magistrates authority to punish also as far as 50 Rupees, or a month's imprisonment, in cases of not sufficient importance to require committal to the Criminal Court.—Sections XLIII. XLIV. XLV. of Act VI. of 1844, fix the monopoly price at 1½ Rupee per maund, authorize Government to lower the price, and direct that salt once purchased at this price may be landed free at any other Madras Port. In Schedule A, the Import duty by sea was fixed at 3 Rupees per maund.

150. The monopoly price fixed in the above Regulation was lowered to 1 Rupee per maund, or 120 Rupees per garce, by order of the Court of Directors, at the close of 1844; and in 1853, the import duty was reduced to 12 annas per maund.

151. As regards embezzlement, breach of trust, &c., the Regulations that apply generally to revenue servants (IX. of 1822 and XIII. of 1850) can be enforced.

152. Besides this, any salt merassidar forfeits his privileges, and his pans are taken away from him, if he is found conniving at fraud.

Salt Revenue protected by adherence to the Rules published by the Board of Revenue.

153. Besides these Legislative Enactments, the Revenue is secured by having (which is not the case every where) an efficient establishment, and by carrying out the Rules laid down by the Board of Revenue for the guidance of Collectors, dated 23d December 1850, and printed in page 546 of their Circular Order book. They prescribe the warning off all workmen at sun-set; the fencing of the depôts, so as to make them quite inaccessible; the receiving of all salt into store by actual measurement; the size of the heaps; the minimum quantity to be sold to a purchaser; specification of the measure to be used and the method of measuring; payment of manufacturers; precautions for preventing intrusions at the stores during the hours of sale; delivery of rowannahs or permits; with printed forms of Periodical Returns to be submitted to the Board of Revenue, shewing from time to time the quantity manufactured at each pan, the quantity brought into the depôt, the quantity sold and remaining on hand, and the proceeds of sales. Accounts of wastage—Returns of Salt available for Export—where exported to, and an annual general account of all the sales and money transactions. Estimates for "advances," are submitted for the Board's sanction, annually. The current prices of salt in each district are reported monthly. Estimates for repairs are submitted through the Department of Public Works.

154. An annual statement of the salt revenue is furnished by the Board to Government.

155. In addition to the general rules laid down by the Board of Revenue, subordinate rules are from time to time issued by Collectors to their Subordinates, and directions issued to meet cases not generally provided for, or orders which have been infringed.

Salt not a separate agency in this Presidency.

156. There is no separate department for the supervision of the salt revenue in this Presidency, either Sudder or Mofussil. It is placed in the hands of the Board of Revenue, together with the Land Revenue Customs, Moturpha, Stamps, Abkarry, &c.; and in the Mofussil it forms one of the several departments under the management of the Collector.

157. An Uncovenanted Assistant to the Collector of Madras was appointed, under orders of Government 23rd November 1852, at the recommendation of the Board, in consequence of the large transactions in this locality, the distance of the pans from the depôt, and various other reasons, which demanded the personal services of a man of activity, intelligence and integrity. The appointment has been found to answer.

158. With this exception, there is no Agency between the Collector and the Native Establishment. The immediate charge of the Salt in each District, where it is manufactured, is generally entrusted to the Head Assistant Collector; but his Revenue and Police duties make it impossible for him to exercise great personal supervision, especially where the sea-board is extensive and the depôts numerous.

159. The details of the establishment* differ in each district; but generally each depôt† is under an Ameen, Peshcar or Tannadar, who is assisted by a Deputy, with Native Writers, Accountants, Inspectors, and a guard of Peons under a Duffadar. A detailed list of native officials and their respective duties having been required, the Returns from the several Collectors are furnished in the Appendix.‡

160. The facility of fraud, and the great gain to be obtained, often prove too great temptation to the native establishment, who are certainly not remunerated in proportion to their responsibility; and without the *constant* and *personal* check of some European Officer, it cannot be expected that thorough integrity will be preserved.

LOCAL MEANS FOR PREVENTING FRAUD.

161. The local precautions chiefly adopted to prevent fraud, are, to have watchers over the pans during the manufacture—to make the manufacturers collect and pile the day's salt into small heaps close to the pans, where it is left to dry before it is brought to the depôt; to secure these heaps with some clay stamp to prevent their being tampered with; to estimate their contents, and send in a daily report to the Collector, by which means some check is kept as to the quantity that *ought* to be received in the depôt; to insist on the salt being brought from the pans to the depôt, as soon as it has at all dried; to have it carefully measured, and not (as used to be customary) make the manufacturers give heaped measures;§ not to allow any sales to go on where salt is being stored; to have all returns entered originally in books with each page previously stamped and numbered by the Collector; to report periodically what rowannahs have been issued, specifying the date and number of each, also the quantity it covers; to have the salt heaps

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* The charges on account of Establishment will be seen in APPENDIX.

† The Ameen or Peshcar is also sometimes invested with Police authority in the vicinity of the depôts.

‡ Appendix L.

§ If more salt can be introduced than the accounts shew, any surplus after sale is fraudulently sold by the salt servants.

(each 10 garce) frequently re-measured by the European Assistant; to have good thatching over the heaps to prevent wastage; to have daily Returns of every mercal of Salt brought into store, and every mercal sold, specifying in this case the number of the heap; to report the loss or wastage on each heap as soon as it is sold off, specifying the date on which that heap was stored; to watch any fluctuations in the extent of manufacture, sale, wastage, &c. and to investigate the causes.

162. The following detail is more especially applicable to Tanjore; but the system, varying according to circumstances, is that generally adopted.

TRANSACTIONS AT THE DEPÔT.

163. The merchant wishing to purchase Salt, pays into the Shroff's hands the price, in money, of the quantity he requires, taking in return a receipt on a cadjan bearing a stamp and number, which have been previously struck upon it in the office of the Covenanted Officer in charge. This receipt is presented by the merchant to the Peishcar on the Salt Platform, who orders the quantity of salt required, to be measured out and delivered to the purchaser, with a rowanah or pass shewing the quantity purchased and its destination, the amount paid, the number of bandies* or bullocks, the time within which only the pass is to be valid, and the number of bags in which the salt is packed. When the Salt is delivered to the purchaser, the quantity purchased, the name of the purchaser, his village, the amount paid and the date of sale, are entered in a "Sale-Book;" the book being secured from interpolation by each leaf having upon it, previous to being used, the signature of the Covenanted Officer. At the same time the Curnum writes the rough Cooroopoo account,† this is fair copied on the following day on stamped cadjan, the rough copy is kept in the Salt Cutcherry, and the fair copy is sent to the Covenanted Officer's office every fifth day. The Moodepumalai is also written by the Curnum during the sale. This is an account shewing the items sold to each purchaser, and the particulars of the coin in which its cost was paid: this is written, both to be kept as a record, and for the information of the Shroff, that he may compare it with his receipts of money, and see if they coincide. The Peishcar, or head native officer, only puts his initials to the *receipts for money paid*: the subordinate officers sign all accounts, and the Peishcar is considered responsible for their correctness. The object intended is, to guard against fraud by making it necessary that, if any should be attempted, it should involve

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* A Bandy (cart) can convey about 40 mercals or 12 maunds. 30 mercals is an usual load.

† Appendix M.

so many parties as to render it more easy of detection. This object is, to a certain extent, secured; but the evasion of orders as to storing and disposing of Salt (which is easy under the measuring system on account of the indefiniteness which must attach to any rules regarding the measurement of so compressible an article as Salt), enables the salt servants to defraud Government, as it is believed, to some extent, and the only check upon such evasion is constant measuring of heaps by the Covenanted Officer and Amildar during the time of storing.

ROWANAHS OR PERMITS.

164. One means for checking fraud is the Rowanah or Pass referred to in Clause II., Section XII., Regulation I., of 1805, without which no Salt can be conveyed; and under Clauses I., IV. and V., of the same Section, Salt found in transit without a Rowanah, or in excess of the quantity stated in the Rowanah, is liable to seizure and confiscation. This document contains the following entries:

1. The number of the Rowanah.
2. Date of issue.
3. To whom granted.
4. Quantity of Salt.
5. Where purchased.
6. Price paid.
7. On what laden, whether Bullocks, Asses, Carts, Boats or Coolies.
8. Whither going.
9. Remarks.

165. The effect of Rowanahs in protecting the Salt Revenue is now greatly diminished. Formerly there were Sayer Chokies along all the roads, and at every Chokie, examination was made of any Salt in transit.*

166. Since the abolition of the Sayer duties under Act VI. of 1844, this check no longer exists. It is true that under Clause III. of Section XIII. of Regulation I. of 1805, Police Officers are authorized to seize and detain (until a decision is given by the Magistrate or Collector) Salt unaccompanied by a Rowanah, but in practice, few Police Officers will take the responsibility or the trouble of examining and detaining Salt in transit; nor is it advisable to encourage them to be over-meddling in this matter. The exactions and annoyances to which traders were subject under the Sayer system are not yet forgotten, and the

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* Clause III., of Section XII., of Regulation 1 of 1805.

Board of Revenue would ere this, have recommended the abolition of Rowannahs altogether, had it not been that they were necessary under the Regulation.

167. In addition to the above Rowannah Rules enforced by Regulation, it used to be usual under the spirit of Section XIV of the Regulation, to require all purchasers of Salt, who took out a Rowannah for places beyond the District where the sale took place, to deliver up their Rowannah at the first Chokie specified in the Rowannah. These were collected and sent back to the Collector of the District where the Salt was sold, in order that the same Rowannah might not be used twice over, and to enable the Collectors of Salt Districts to ascertain if the Salt, purchased at the Cotaurs, was really for the place mentioned in the Rowannah.

168. In theory this was also a good check upon fraud, but it cannot be properly carried out since the abolition of the Chokies: the trader will not go out of his way to look for an Official to whom to deliver his Rowannah, and it is useless to attempt to collect it. Even in former days it was seldom that all the Rowannahs issued in a District found their way back again, and as the system was not obligatory, the Board of Revenue did not require it in the revised Salt Rules of December 1850.

169. That Rowannahs, when the roads were guarded under the old Sayer system, were a great protection to the Salt Revenue, is admitted; and even now, they are a check to a certain extent, but however unobjectionable a Pass or Permit within a limited range—as in the case of Abkary Permits—yet, to subject traders to an inquisitorial visit from every Native Police Officer they may meet during a journey of some weeks, must operate to the prejudice of the traffic, and be accompanied by so many evils, that it seems desirable to put an end to the present practically effete system, and leaving the merchant free on transit, use every exertion to prevent smuggling at the place of manufacture.

170. The modes in which smuggling is generally carried on at the place of manufacture and sale are,

SMUGGLING HOW PRACTISED.

1st. By the carrying off at night the salt which has been left to dry at the pans, before conveying to store. In this the manufacturers are the parties chiefly concerned, and they do, no doubt, occasionally elude the vigilance of the watching peons.

2d. By the connivance of the Public Servants, who sometimes, while sales are going on at the depôt, contrive to sell some of the salt, just brought in from the pans, not yet measured and stored. In this case, an understanding exists between the officials, the manufacturers, and the purchasers. To prevent this, sales should never, if possible, be allowed at those parts of the depôt, where new salt is coming in.

3d. By the salt servants storing an excess in each heap, and, for a consideration, giving purchasers more than their proper quantity. In this manner, when a 10 garce heap is reported as sold off even without wastage, a considerable sum may be realized. This, perhaps, being the least easy of detection is the most common method in which the Salt servants effect frauds. Formerly, the Salt servants were allowed to receive over-measure from the manufacturers, on the plea of making up for what would be wasted; but the practice has been prohibited over and over again. It is however still carried on, and it is impossible to prevent it entirely, though every effort is made. Even under the very eyes of an European Officer, an expert measurer will take in 10 per cent over, or 10 per cent less, than he ought, without much fear of detection, and as it is impossible for the European Officers to see one thousandth part of the salt measured, the matter is easily arranged. The only check is for an Assistant Collector to visit a platform unexpectedly, and re-measure some of the heaps; but even then, as above stated, he cannot be quite certain. Salt is an article which is capable of being greatly tampered with in measuring, especially in large quantities.* A slight jerk will make the mercal hold an extra quantity, and a loose pouring will make 9 garce appear 10.

4th. By the Salt servants entering a greater "wastage" than has really occurred, the difference having been clandestinely sold by them. The "wastage" of salt is most uncertain. The weather, the season of storing, the degree of dryness at which it is stored, *must* differ even in salt from the same pans and kept the same time, and with the same degree of care. It is to be observed that the salt (except at the Cotays of Malabar and Canara) is kept in the open air, with merely a thatch over the top. It is an article greatly affected by weather, especially, till it has *settled down* after keeping a few years, and any general standard of wastage is unattainable; still, each Collector can tell from experience what may be considered a fair allowance for each depôt, under *ordinary*

* A ten garce heap is nearly 4½ tons.

circumstances, and the wastage has certainly decreased since the subject has been more attended to.

5th. By the use of Swamp salt and Earth salt. These have been already alluded to: the *extent* to which this kind of illicit trade affects the monopoly it is quite impossible to say. The manufacture is never carried on on any large scale, in one locality.

6th. The manufacture of Sea salt (or perhaps it is rather Swamp salt), in small quantities, along the unfrequented part of the Coast, is not uncommon. It appears that for many years, both in Canara and in part of the Ganjam district (Itchapore), the Fishermen have been allowed to manufacture the salt required for curing their fish. Under this plea, of course, they dispose of salt on their own account; and even where no permission of this kind is given, sea salt is roughly manufactured in small quantities.

171. It is in the districts of Vizagapatam and Ganjam that most salt is supposed to be smuggled. A short time ago, frauds to some extent were discovered in Masulipatam. The establishments in the Northern Circars appear to be on too small a scale to exercise proper supervision.

172. The "Charges" debited to salt, from the time the monopoly commenced to the close of the last Fusly, will be seen in the Appendix.* These do not include "Recoverable Advances." The form of account is in accordance with that issued by the Board of Revenue in their Salt Rules of December 1850. The following is an abstract statement for the last three Fuslies. The total charges are about 7 lacs per annum to a gross revenue of 50 lacs, or 14 per cent.

	1260.	1261.	1262.
Salary of Fixed Establishment,...........	1,40,859	1,39,621	1,42,003
Do. extra Sibbendy,..........	2,422	2,553	3,007
"Extra" charges, and Saderwared......	65,417	56,758	59,774
Roosooms,......	5,244	6,217	4,638
Hire to Manufacturers,...	2,87,543	2,95,660	3,12,529
Paid for Bombay salt,.....	1,32,247	1,29.075	1,40,848
Repairs,........	619	795	1,315
Hire of Boats,.................	13,925	15,880	13,506
Charges of Export,......	726	"	138
Shipping charges, ...	2,097	1,590	3,386
Compensation for abolished pans,.........	3,609	2,438	2,215
Indemnification to the French............	21,000	7,000	21,000
Total...	6,55,708	6,57,587	7,04,359

* Appendix C.

173. In the above statement, the Collectors seem to have included the pay of the Hungamy, or temporary establishment (called in at the season of manufacture), under the head of "Extra charges and Saderwared." A separate account of the temporary establishment is, however, always submitted by the Collectors for sanction, and the amount of the whole establishment, fixed and temporary, for the three last Fuslies is given below.

	Fusly 1260.			Fusly 1261.			Fusly 1262.		
	Fixed Establishment.	Temporary Establishment.	Total.	Fixed Establishment.	Temporary Establishment.	Total.	Fixed Establishment.	Temporary Establishment.	Total.
1	2	3	4	5	6	7	8	9	10
Ganjam, ...	4,258	493	4,751	4,313	496	4,809	4,295	510	4,805
Vizagapatam...	4,096	1,110	5,206	4,124	731	4,855	4,137	923	5,060
Rajahmundry ..	7,695	3,740	11,435	7,075	3,110	10,185	7,237	2,222	9,459
Masulipatam . .	5,229	958	6,187	5,271	955	6,226	5,115	1,024	6,139
Guntoor	10,407	48	10,455	10,247	54	10,301	10,251	53	10,304
Chingleput. ...	11,503	....	11,503	12,269	....	12,269	12,460	767	13,227
Madura.	13,351	....	13,351	13,366	....	13,366	13,296	....	13,296
Nellore.........	26,660	132	26,792	26,346	132	26,478	26,447	132	26,579
North Arcot...	800	....	800	....	....	....	....	....	....
South Arcot...	6,086	42	6,128	5,706	42	5,748	6,004	42	6,046
Tanjore.........	13,260	168	13,428	13,232	168	13,400	12,884	168	13,052
Tinnevelly......	10,272	....	10,272	10,323	....	10,323	10,320	....	10,320
Canara...	15,653	2,411	18,064	15,614	2,550	18,164	16,387	2,997	19,384
Malabar	5,743	452	6,195	5,792	444	6,236	5,838	512	6,350
Madras.........	5,846	2,256	8,102	5,943	2,364	8,307	7,332	3,140	10,472
Total...	1,40,859	11,810	1,52,669	1,39,621	11,046	1,50,667	1,42,003	12,490	1,54,493

174. The designations and duties of the various persons employed in the Salt Department, as taken from the replies of the Collectors to the Circular issued by the Board of Revenue, will be found in the Appendix*. No portion of the salaries of the Collectors, or their Assistants, is included in the salt charges statement of the Revenue Board's Office, though a different arrangement prevails in the accounts furnished to Government by the Accountant General. In the Northern Circars, the salt establishments are inefficient, and it is understood that Mr. Elliot the Commissioner, has prepared a plan for their complete revision.

175. In the event of the introduction of an Excise, and indeed even now when it is a question what the Import duty on salt to Madras should be, it is very desirable to ascertain exactly what may be considered the "Cost Price." The inquiry will at the same time tend to shew at

* Appendix L.

what price salt could be shipped at the different Madras ports for export to Bengal. In this case, of course, *all* charges should be covered. In accordance with the instructions contained in a Despatch from the Court of Directors, dated 30th July 1851,* forwarded to the Board of Revenue by Government, 14th October 1851, the different Collectors were called upon to state what was the cost price of a garce of salt in each district, and the result was submitted to Government,† and subsequently published in page 165 of the Supplement to the Circular Order Book of the Board of Revenue.

176. This Return did not in every instance enter into details, and the Collectors were again called on to give the items on which they founded their calculation. From this amended‡ Return, the Table given farther on is made out. It should, however, be premised, that the "cost price" is ever fluctuating. It is, in most instances, calculated by comparing the "charges" for a certain interval with the receipts from the salt sold in that interval. One Collector may take a large series, another, a short series of years. Another may take only the last year, whereas the present year might give a different result. And again, strictly speaking, the "cost price" should be calculated on the quantity *made* rather than on the quantity sold. The objection to this is that the quantity *made* has hitherto varied very much. It may happen that, at the end of one year, a large stock in hand remains, and a comparatively small quantity is made the next. The "charges" would be nearly the same for both years.

177. The Board have met with a copy of the Parliamentary Paper, 4th Report (India Territories) 1853, and perceive, in pages 262-272 of Appendix, that it is considered a point of importance to ascertain the "cost price" of the salt made in India, and they fully concur with the views therein expressed, that "the Revenue ought to be charged, "not only with the expenses that would be incurred under any system, "but with all expenses that, under a different system, would be saved

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* The Court state that "it is desirable that you should take into consideration the expediency "of reducing the amount of Customs duty (on Salt) to the average profit derived from Government "from the Native Salt."

† On the 19th April 1852.

‡ The difference between the first Return as published in the C. O. Book of the Board of Revenue (Supplement, page 165) and the present computation are very trifling, except in cases which will be accounted for farther on.

"altogether; and in the next place, many of the charges, which are nominally of manufacture, are, in reality, of collection, and consequently debitable to revenue. No charge, in short, which, under a system of excise, would either fall on the Government, or be saved altogether, ought to be included in the cost price of salt. Such charges are incurred for purposes of revenue, and not of manufacture."

178. In page 199 of the above Report, Mr. Prideaux states the views of the Board of Revenue in Bengal as follows:

"The Board consider that the correct principle which ought to be adopted in calculating the prime cost of home-made salt is, to add to the price, actually paid to the Molunghees, so much of the expense incurred by Government in bringing it to market as would be incurred by private individuals, or a Joint Stock Company, for the same purposes, on the supposition that the salt were manufactured under an excise system, and subject to the restrictions inseparable from that mode of management; the operations of Government being confined to the collection of the fixed duty, and the prevention of illicit dealings. All other charges, under whatever name they may be brought to account, the Board hold to be charges incurred for the security and protection of the salt revenue under its present form of administration, and therefore forming no part of the cost price of the salt."

179. It is not necessary, nor would it be possible, to analyze every item of petty expenditure under the head of "salt charges" at Madras, as has been done in Bengal. There is no such distinction, for instance, as in Bengal, of Sudder and Mofussil establishment. No doubt the greater portion of the present establishment would have to be kept up under a system of Excise. The charge for establishment is not therefore included in the following Table as part of the "cost price;" neither the "Extra charges," which are not given in detail in the Collectors' accounts, but in which appear to be included the "Temporary Establishment," employed chiefly on Preventive Service, during the time of manufacture and storing.

180. It is proposed, therefore, to include, in the "Cost price," merely the hire paid to the manufacturers (generally called Coodeewarum), repairs to platforms, thatching, hire for measuring, boat hire, and Canal toll. The Roosooms, which are similar to the Khorakee of Bengal, may be considered a Revenue charge.

181. The estimate then is as follows—per garce of 120 maunds:

	Cost price.			Revenue charges.			
	Coodeewarum.	Repairs, measuring, &c.	Total.	Establishment.	Extra charges &Saderwared.	Roosooms.	Grand Total.
1	2	3	4	5	6	7	8
Ganjam, ...	5	"	5	1½	½	"	7
Vizagapatam, ...	6	½	6½	5	"	"	11½
Rajahmundry, ...	6	1	7	4	1¾	"	12¾
Masulipatam, { Sea	5	1½	6½	"	"	"	6½ }
Masulipatam, { Swamp	1	½	1½	"	"	"	1½ }
Guntoor, ...	7	¾	7¾	2¾	"	"	10½
Nellore, ...	7½	1	8½	5	¼	"	13¾
Chingleput, ...	13¼	¼	13½	4¾	"	"	18¼
South Arcot, ...	9½	½	10	3¾	"	½	14¼
Tanjore, ...	10	"	10	3	"	"	13
Madura, ...	10½	¼	10¾	4¾	¼	"	15¾
Tinnevelly, ...	10	"	10	4¼	¼	¾	15¼
Malabar, ...	32½	"	32½	2½	4½	"	39½
Canara, ...	16¼	2¾	19	3¼	¼	2¼	24¾
Madras, (Town)	10	6¼	16¼	1	"	"	17¼
Ennore Depot, 19 Rupees, as explained farther on, ...	"	"	"	"	"	"	19

N. B.—The chief instances in which this Table differs from that published in the Circular Orders of the Board of Revenue, (page 165 Supplement,) are in Vizagapatam, Madras and Nellore. In the first instance, the Collector included "wastage," which was very heavy in Vizagapatam. In the second, the Return was for sales at *Madras*, (not at Ennore,) and did not include charges of Establishment and Canal toll. In the third case, "Extra charges" were, by an oversight, omitted in the Table sent up by the Board. The Collector of Masulipatam has omitted "Establishment" as a *charge*. It is about 3 Rupees a garce, and should be added to columns 5 and 8.

182. Column 4 may be taken as the "cost price." The details, according to the Collectors' Returns, have been slightly altered in those cases where the average Coodeewarum has been calculated by them on the mean of 2 or 3 rates, instead of being given with reference to the much larger sale at one of those rates than at the others. Also, where there have been extraordinary *repairs* in the year, forming part of the Collectors' calculation, a smaller sum has been taken. As before observed, some portion (though it cannot be stated how much) of the charge of *Establishment* should be added to the "cost price;" and it seems reasonable that an allowance for loss by '*wastage*' should be admitted.

183. It is also to be observed, that the Collectors have included the charges borne by Government in *shipping* salt for exportation to Calcutta either on Indent, or Private trade. These are included in column

3.—Rajahmundry, Nellore, and Madras are the shipping districts. The charge per garce of putting the salt on board is about 1 or 1½ Rupee, except at Ennore (the Madras shipping depôt,) where it is more. The Collector's Estimate is as follows, including the charge for bringing the salt from the Pans, which are at some distance from the beach:

COST PER GARCE AT THE ENNORE DEPOT.

	Rs.	A.	P.	Rs.	A.	P.
Salt Manufacturer's share, ...				10	,,	,,
Average Boat hire, ...				,,	12	6
Landing Charges, ...				,,	7	6
Cooly hire for measuring and covering Salt heaps, ...				,,	5	10
Value of Palmira leaves, ...				,,	6	,,
Hire for laying clay over heaps, ...				,,	1	,,
SHIPPING CHARGES.						
For weighing salt, ...	,,	5	,,			
Batta to the Boat Crew, ...	,,	5	,,			
Charges for conveying Boats from Madras to Ennore, and from the latter to the former, ...	,,	6	,,			
Paid for trips, ...	2	14	,,			
Hire for loading Boats, ...	,,	6	,,			
				4	4	,,
				16	4	10
Sundry Charges, Gunny Bags, &c....				1	11	2
				18	,,	,,
Share of charges of Madras Establishment, ...				1	,,	,,
				19	,,	,,

184. The low price at Masulipatam is owing to the cheapness of making swamp salt. It costs about 1½ Rupee per garce, whilst the sea salt costs 6½ Rupees. Under the head of "Coodeewarum" for Canara and Malabar, is entered the price paid for Bombay salt. But as there is indigenous salt sold in Canara, and also salt from Goa, the Collector's estimate is given in detail below.

	Cost per Garce on the whole quantity including wastage.			Particulars.								
				On Bombay Salt.			On Goa & Kurrachee Salt.			On the Salt manufactured in Canara.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Net purchase price,.........	16	2	10¼	23	,,	6	21	7	11	11	5	5
Beriz on salt pans,.........	2	4	9½	,,	,,	,,	,,	,,	,,	4	1	10
Fixed Establishment,.......	3	5	2½	,,	9	7	4	2	8	4	2	8
Saderwared,...........	,,	1	2	,,	,,	5¼	,,	1	5	,,	1	5
Extra Establishment,......	,,	7	9¾	,,	3	6¼	,,	9	1½	,,	9	1½
Pattimar and Boat freight,	2	13	3	1	10	6	,,	,,	,,	4	5	9
Repairs of Cotays or store houses &c.,...............	,,	11	2	,,	3	9½	,,	13	5½	,,	13	5½
Total..	25	14	3	25	12	4	27	2	7	25	7	8

185. As regards salt supplied to Bengal, the price charged in Madras should not only be the total of column 8, but there should be an *allowance for wastage;* and also the payments to the French Government, and the compensation for pans abolished should be included, for in this case the object is to clear every expense. It will yet remain to arrange the price to be paid at different Ports, as the present uniform rate of 15 Rupees per 100 maunds, or 18 Rupees per garce (Government bearing the expense of shipping,) it will be seen, does not quite cover the expense at Ennore; whilst at the Ports of the Northern Circars, it might be charged much less.

186. It will be seen from the detailed "salt charges"* and "salt sales"† that the charges are about 7 lacs per annum to a sale of nearly 53 lacs of maunds, or 44,000 garce. This would make the expense 16 Rupees per garce. But excluding Malabar and Canara, supplied chiefly from salt purchased in Bombay, the *charges* would be about Rupees 5,04,500‡ (fusly 1262) to a *sale* of 45 lacs of maunds, or 37,500 garce. This is 13·4 Rupees per garce, on an average, which may be thus apportioned:—

		Rs.
Revenue charges.	Salary of Establishment, ...	3·182
	"Extra charges" and Saderwared, ...	·122
	Roosooms, ...	1·252
Hire to Manufacturers, ...		8·301
Repairs,...		·018
Charges of Export,...		·004
Shipping Charges, ...		·059
Compensation for pans, ...		·090
"Indemnification" to the French, ...		·372
		13·400

187. This, with 5 per cent. *wastage,* will amount to 14·1 Rupees per garce, (or 11·7 Rupees per 100 maunds§) and may be considered the average cost to Government (including all charges) of salt on the Coromandel coast.

188. It has been from time to time a matter of consideration

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* Appendix N. (1 to 3.)

† Appendix O. (1 to 3.)

	Rupees.
‡ Total...	7,04,359
Deduct Canara and Malabar...	1,92,879
	5,11,480
Deduct Rs. 7,000 from the 21,000 charged under the head of "Indemnification" because 14,000 is the yearly allowance...	7,000
	5,04,480

§ R. 1 A. 2 P. 9 per maund.

whether the price of salt to the inland inhabitants should not be lightened by a system of Drawback, or of Depôts.

189. In 1820, when the Government* determined to reduce the monopoly price from 105 Rupees to its former rate of 70 Rupees per garce, they suggested that it might be advisable that the monoply rate should permanently vary in different districts, with a view, as far as practicable, of equalising the consumption prices over the country; that, for instance, the price might be lowered in Nellore and Guntoor, if Bellary and Cuddapah could only be supplied from thence—and so on; that if, on enquiry into the consumption prices in the different districts this plan proved inexpedient, a drawback of a great part of the monopoly price, graduated in the several inland districts, so as nearly to cover the expense of carriage, might be allowed on salt carried into the interior.

190. The Board of Revenue declared themselves averse to this proposition, and the Honorable Court,† in approving of the reduction of the monopoly price, expressed their doubts of the propriety of the measure suggested by Government, considering that it was equivalent to defraying the cost of carriage to the more distant consumers; and that no good reason existed why this should be done in the case of salt, more than in any other article of equal importance.

191. Here the matter rested until 1839, when Mr. Blackburne, Collector of Madura,‡ reporting on the Salt sales of that District, stated that it had occurred to him, that a drawback on salt imported to a certain distance in the interior, would be advantageous.

192. The Board§ observed that the question had already been considered and objected to by the Court of Directors, and that as in the inland districts, Bellary &c., the cost of transport enhanced the price of salt by even more than 100 per cent, any remission which Government could make in the monopoly price would have little effect on the gross price, while such a system would entail much labour on the public establishments.

193. The Government were still inclined to support the measure, but it was ultimately abandoned, in consequence of the view taken by

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* To Board 20th March 1820.

† Despatch dated, 10th September, 1823, p. 65. in from Government 27th February 1824.

‡ From the Principal Collector of Madura to Board of Revenue dated 31st August 1839.

§ Board's Proceedings 26th March 1850.

the Board of Revenue in their letter to Government of 15th January 1844. They report as follows:—

" The present would appear a fitting opportunity to advert to the " measure suggested for consideration by the Principal Collector in his " Report on the Extra Sources of Revenue for Fusly 1248, P. 4., and " which has since formed the subject " of the correspondence noted in the " margin. The question mooted by " Mr. Blackburne in the above re- " port, was, how far the consump- " tion of earth salt might be check- " ed, and the demand for sea salt " increased, by some such measure as allowing a drawback on all sea " salt reaching a certain direct distance from the coast." In the Minutes of Consultation 24th April 1840 P. 6., the Government, remarking on the desireableness of any measure which, by increasing the consumption of sea salt, would at once "augment the public revenue, and contribute to the health and comfort of the people, by giving them a good for a bad article," direct, that Mr. Blackburne be called upon to state, " to what extent he expects the consumption of sea salt would " be increased in the interior by the grant of a drawback on the price " at the pans." It will be seen from the Principal Collector's letter of June 30th 1840, P. 2., "that, as a measure solely involving increase " of *revenue,* he is not inclined to recommend a drawback on salt,"* and again in a subsequent communication he states—" Two motives led me " to the consideration of the subject—1st., the asserted injurious nature " of earth salt to those who could obtain no other; and 2dly., great in- " crease to this branch of revenue. The reports of such Collectors as " have favored me with answers to the questions I submitted to them in- " duce me to believe that the inhabitants of countries, or tracts of countries, " using only the earth salt are equally healthy, long lived and able " bodied, with those eating only sea salt.† The principal inducement " in my own mind to the enquiry is set at rest. The second still exists, " but in a less degree, inasmuch as the subject is now one of Revenue " only, exclusive of humanity."

Board's Pro. 26th March 1840. Para. 2.
Min. of Cons. 24th April 1840. P. 6.
Letter from Prinl. Coll. 28th May 1840. P. 3.
Board's Pro. 22d June 1840.
From Principal Collector 30th June 1840.
Board's Pro. 23d July, 1840.
Report on Extra Revenue for Fusly 1250. P. 9.
do. on do. for 1251. P. 9.
To Principal Collector 31st July 1843.
From do. 11th August 1843.

" As a question of *Revenue* only, the Board could not advocate the " measure suggested. As remarked in their Proceedings of 26th March " 1840, the high cost of salt to the inland consumer is occasioned, not

* Report on Extra Revenue for Fusly 1851 P. 9. dated 24th August 1842.

† Vide para. 90. of this Memo.

"only by the original monopoly price of the article, but also by the "heavy charges which attend its transport into the interior. No re- "duction therefore in the former could be followed by such increased "consumption as would secure the Government from loss, unless accom- "panied by a corresponding diminution in the latter. Thus for illus- "tration, the salt purchased at the Madura pans, at the usual monopoly "rate of 30 Pagodas per garce, will, in all probability, be sold at double "that price on its arrival at Coimbatôre. Supposing the drawback in "this case to be 50 per cent on the monopoly price (and a low rate "would be of little avail), the selling price of salt at Coimbatore would "be reduced from 60 to 45 Pagodas, or 25 per cent. on its present cost; "but the loss to the public revenue would be 50 per cent.; and although "some increase in consumption may undoubtedly be anticipated, it would "not be such as to compensate for this direct sacrifice. The same reason- "ing will hold, whatever be the rate of drawback allowed, and will apply "with added force to places more remote from the coast than Coimbatore. "The Board are fully alive to the importance of reducing the cost of so "essential an article of consumption as salt, but this, they apprehend, can "be effected only by restricting the monopoly price to the minimum rate "which the exigencies of the state will permit, and by increased atten- "tion to the internal communications of the country."

194. The Board, as now constituted, are of the same opinion in regard to Government Depôts and Drawbacks, though they trust that the measures in progress for ameliorating the communications of the country will greatly remove the causes that have hitherto given some anxiety, as regards the inland supply to the poorer classes. A reduction in the monopoly price is no doubt the most practical mode of meeting the difficulty.

195. The view taken by the Court of Directors in their Despatch of 10th September 1823, and that of Mr. Bourdillon, Collector of North Arcot, appear to place the matter in its proper light.

196. The Court observe.—"We are much more doubtful with re- "gard to the propriety of the suggestion which you have referred to the "consideration of the Board of Revenue, that the monopoly price should "be different at different places in such a manner as to equalize the "price to the consumers. If the same Monopoly price were taken from "all, the cost would be increased to the consumers in distant places, "only by the expense of carriage. To reduce the monopoly price in "such a manner as to make the price to the consumer the same at the "distant, as at the neighbouring places, would, we think, be neither more

"nor less than to make the Government pay the cost of carriage to the "more distant consumers; and no good reason has presented itself to us "why this should be done in the case of Salt, more than in any other "article of equal importance. We are therefore disposed to believe that "upon a further consideration of the suggestion you will see reason to "abandon it."

197. The passage referred to from Mr. Bourdillon's letter is as follows—"It has been proposed by some, with the view of diminishing to "the consumer the cost of transport inland, that Government should "establish depôts in various parts of the country, at which Salt should "be sold at the regular Government price. It appears at first sight "only fair thus approximately to equalize the tax; but it would be "done at great cost. I think it may be considered certain that the "actual transit and storing of the Salt would cost the Government far "more than they would cost individuals; the excess would be so much "capital wasted, and in addition to this, the peculations now practised at "the pans would no doubt be carried on in this new and wide field, thus "involving great loss to Government. In both these ways, as well as in "the benefit given to the inland consumer, the productiveness of the tax "would be diminished, or, in other words, the lowering of the Government "price would *pro tanto* be rendered impossible."

"In a natural state of things, that is, if there were no monopoly, the "inland consumer would pay more for sea salt than the coast consumer. "The coast possesses this advantage over the interior; but the inland dis- "tricts have other advantages wanting on the coast, a milder and more "productive climate; and an aptitude for raising some valuable exportable "products, such as Cotton and Indigo; and it appears to me, that the "wisest part of Government is not to interfere with this natural state of "things; and that whatever sacrifice of revenue can be made, will be ap- "plied more economically and more judiciously in a reduction of the first "cost rather than in any attempt to perform the functions of a trader; "and that the subsequent distribution of the commodity should be left to "the ordinary operations of trade. For the foregoing reasons I think "the establishment of local salt depôts unadvisable."

198. The question of a salt excise was mooted with reference to Canara in 1852. The Collector proposed an excise and a low rate of import duty on salt brought from Arabia, Goa, and Bombay. The Government approved, as far as regarded Arabia and Goa, and subsequently,

in consequence of the Orders of the Court of Directors,* a general import duty of 12 Annas, instead of 3 Rupees, per maund has been sanctioned. The views of Mr. F. Maltby, on the question of excise, are now (he states) the same as in 1852; and as he has gone into some detail on the subject, a copy of his letter is given in the Appendix.†

199. The question of substituting an excise throughout the Madras Presidency having lately been the object of Mr. Commissioner Plowden's enquiries, the different Collectors of districts, where salt is manufactured, were called on for their opinion.

200. In consequence of excise being a method of Revenue unknown in this Presidency, and there being no information to shew how it was carried on in Bombay, some misapprehension on the subject naturally prevailed; but the Collectors generally objected to it.

201. The objections were chiefly the following.

1st. The impossibility of guarding against smuggling, in consequence of the facilities for making Salt all along the coast, from Ganjam to Cape Comorin.

2d. The increased expense of establishment.

3d. The probability of a deficient supply, in consequence of want of capital.

4th. The injury to the present Meerassidars, who, of course, would not get so high a price for their labor.

5th. The necessity that would still continue to make advances, and thus become, as it were, parties to the manufacture as under a monopoly.

6th. The deteriorated qualities of the article.

202. It does not appear necessary to discuss the relative advantages of a Monopoly and an Excise. It is presumed that the former is doomed; and, if an excise *is* to be substituted, the objections urged do not appear to the Board insuperable.

203. The first is the most serious objection; and, if the manufacture is to be left perfectly free to all persons in all places, it would be fatal. But the Board believe that a modified form of excise is not inconsistent with the views of those who oppose the Monopoly; and if the manufacture is limited to certain localities, the establishment ne-

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* 30th July 1851.

† Appendix P.

cessary for preventive purposes will, it is expected, not increase in a larger proportion than the revenue it is designed to protect. The above explanation disposes also of the objection to having an "army of Chowkedars." There appears nothing in the system itself (independent of the extent of country where it prevails) to necessitate a heavier outlay, in the way of Establishment, than is now required under a monopoly.

204. It is possible that, at first, till the system becomes understood, the supply might not be quite so plentiful as it is now; but this would rectify itself on the principle of the supply meeting the demand.

205. The Meerassidars would probably be somewhat hampered at first; but the Government would be as ready to assist them as any other ryots as far as is consistent; and the objection is not one that should weigh much against other reasons.

206. It might be necessary at first to make the change by degrees, but eventually the Government would participate as little in any salt transactions as they do in Bombay or Calcutta.

207. The Board are inclined to believe, that salt manufactured by private parties under an excise, would be quite as good as it is now: competition would induce this.

208. The Minutes of Mr. J. Goldingham,* second member, and of Mr. E. Maltby,† third member of the Board of Revenue, are submitted herewith.

209. Mr. W. Elliot, senior member of the Board of Revenue, is at present employed on special duty, as Commissioner in the Northern Circars.

210. Two other plans have been proposed—the one to fix a *rent on land* capable of yielding salt, the other to issue *Licenses* for the right to manufacture salt over a certain area.

211. The difficulty of ascertaining the various capabilities of salt grounds must, where the rent would necessarily be very high, render the first plan almost impossible, till at least the capabilities of different localities be tested by future experience.

212. The objection to the licensing system is that in such an article as salt, the speculation would be attended with great risk; and unless the licenses were taken up freely, there might be a deficiency of the supply to an extent sufficient to cause great distress. On this important

* Appendix Q.
† Do. R.

subject, however, Mr. W. Knox, Acting Collector of Ganjam, has entered with some detail, and his letter is given in the Appendix.*

213. The price of salt to the consumer, under an excise system, would fall, in proportion as the private individual could make it cheaper than the Government make it. It could probably be made for 6 Rupees per garce, or 9½ pice per maund. This is the price that a salt Meerassidar generally gives to those who cultivate his pans for him.

214. The excise duty (if the present monopoly price is to be the standard) will not be *less* than 14 annas per maund (or 105 Rupees per garce); for the highest cost price to Government, is not above 15 Rupees per garce,† or 2 annas per maund. Now 9½ pice plus 14 annas per maund will be 111 Rupees per garce,‡ or 8 per cent below the present monopoly price. But it is to be observed, that this is supposing the salt farmer is satisfied with no profit. The profit looked for in a manufacture of so much risk will bring the price fully up to its present rate. Even supposing salt could be made at 3 Rupees a garce, this, with the excise of 14 annas a maund, or 105 Rupees a garce, would make it 108 Rupees, and it is a question if it would not be charged above 120 Rupees.

215. Taking the consumption at a liberal rate, namely 18 lbs. or 6 measures per soul per year, it is 3 Annas 7¼ Pice, or for a family of five persons, Rupee 1-2-0. The wages of a labouring man in the Mofussil are about 1½ Rupee per month; but it is to be recollected that a man's family in India is generally an advantage to him rather than otherwise, as they almost all earn something, or give their labour in some way.

216. It is true that at a distance from the coast, the price of salt is nearly doubled. This is due, not to the monoply price, but to the cost of transit. If, with a monopoly price of Rs. 120, the cost at Coimbatore is 220, it would cost 100, even if it was obtained *free* on the coast. It does not seem correct therefore to make the monopoly responsible for these 100 Rs. In considering its burden, respect should be had only to the wholesale price at the Government Depots.

217. The Board of Revenue at Madras are, however, in favour of a reduction of the price, being under the conviction that the consumption would be much greater, and that it would supersede, to a considerable

* Appendix S.

† This is exclusive of the charges for putting salt on board for Export, which are now borne by Government.

‡ (6+105.)

extent, the use of Earth Salt which, as far as it is consumed, detracts from the salt revenue.

218. There will be, no doubt, a difficulty in dealing with the Earth Salt under a system of excise. If the rate of excise is low, the Earth Salt will not interfere much with the revenue; but at the present rate, it will be necessary to increase the preventive establishment, if it is only to give security and encouragement to persons taking up Salt Works on the coast. A lower rate of excise on Earth Salt might also be desirable.

219. In the event of an excise being introduced, it will be necessary to consider our engagements with the French Government. The *renewed* Convention made between the Government Agent at Cuddalore and the local Government of Pondicherry, dated 1st June 1837, permits, in the 7th Article, either party to withdraw from the engagement, giving a year's notice. This is, as far as the payment of 4,000 Pagodas (14,000 Rs.) granted as compensation on the entire suppression of the manufacture of Salt in the French limits is concerned, but the Convention signed at London, 7th March 1815, by which the British Government agree to pay (Article 5) 4 Lacs of Sicca Rupees for the right of purchasing at a fair price all the Salt in the French Settlements, is also in force. This seems to be continued under the Convention signed at Pondicherry, 13th May 1818, and is paid to this day.

220. The amount of revenue given up by the Madras Government from time to time has been asked for.

221. In 1844, the "Sayer," or Land Customs, was abolished* with the exception of some Frontier duties. The Sayer used to be about 36½ lacs of Rupees. The Frontier duties now amount to about 2½ lacs, making a difference of 34 lacs, per annum. The "charges" were about 7 lacs. From this should be deducted about 3¾ lacs paid as *Drawback*, but entered as charges. They are now about 40,000 Rupees.

222. On the 1st January 1853 the Tobacco Monopoly was abolished. The revenue was about 8½ lacs in the previous year. The "charges" were about 65,000 Rupees after deducting "advances" and cost of tobacco.

223. It is in contemplation to abolish the "Moturpha." The revenue is about 12 lacs; the "charges" about ¼ of a lac.

MADRAS, June 17th, 1854.

W. H. BAYLEY,
Secretary, Board of Revenue.

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* Act VI of 1844.

A

A. D. 1804—REGULATION.

A Regulation for determining on salt, by whom salt may be manufactured and sold; and for collecting a duty on salt within the Territory subject to the Presidency of Fort Saint George.

I. Whereas by Section II. Regulation I. 1802, it is provided that, the rules and orders of the Governor in Council for the Manufacture of salt shall be framed into a Regulation, and be printed and published: Whereas by Section IV. Regulation XXX. 1802, Government has reserved to itself the right of continuing or abolishing, either temporarily or permanently the revenue arising from salt: And whereas it has determined, that a revenue shall be raised, as a duty on the article when sold in addition to the sale price at the place of manufacture, or at such other place as the Board of Revenue may determine, and on importation into the territories under the Presidency of Fort Saint George: the following rules have been enacted for the better security of the Revenue to be collected on salt in the mode above described.

The sale and manufacture of salt in what manner to be conducted.

II. The sale and manufacture of salt shall be conducted on the same principles as heretofore, whether jointly with the manufacturers and Government, or entirely on the part of the latter, and the shares paid to the manufacturers, whether of the proceeds of the sale, or of the salt, or the hire to the laborers, shall continue to be so paid without alteration, unless by mutual agreement.

Persons unwilling to engage in the Manufacture not to be compelled to work at the Pans.

III. Persons unwilling to engage in the Manufacture of Salt shall not be compelled to work at the Pans, whether such Pans belong to Government or to individuals, notwithstanding any usage or custom to the contrary.

Persons holding lands exempt from the payment of Revenue, or under favorable tenure on which it has been usual to manufacture salt, to be furnished with permits, on application, to manufacture and sell salt as heretofore.

IV. Persons holding lands exempt from the payment of Public Revenue, or lands held under favorable tenure in which it may have been usual to manufacture Salt, shall, on application to the Collector and on producing proof that salt had heretofore been made within such lands, be furnished with a permit to manufacture and sell Salt; and Salt Pans in such lands shall, under such permit, continue to be worked as heretofore in all respects the same as if they belonged to Government, subject nevertheless to all the

provisions contained in this Regulation, or in any other Regulation hereafter enacted for the Collection of the Revenue from salt.

A duty to be collected at such places as may be directed by the Board of Revenue.

V. A duty on sea salt manufactured, as likewise on salt extracted from the earth within the Territories subject to the Presidency of Fort St. George, shall be levied by the local officers of Revenue, either at the Pans or at such other places as may be directed by the Board of Revenue.

Rate of duty to be determined by the Board of Revenue.

VI. The amount of the duty on salt at the respective Pans and Stations shall be at a rate to be determined by the Board of Revenue.

The duty by whom to be paid.

VII. The duty on salt shall be paid by the purchasers, not by the manufacturers, and shall be considered distinct from the sale price.

Salt exported by Sea exempt from duty.

VIII. Salt exported by the Sea shall be exempt from duty.

To be charged with duty unless a Rowannah be produced.

IX. Salt imported by sea shall be charged with the established duty, unless a Rowannah, certifying that the Salt Duty has been paid elsewhere, be produced.

Salt imported by land to be charged with the established duty.

X. Salt imported by land into the Territories subject to the Presidency of Fort St. George from the territories of Foreign, European or Native powers shall be charged with the established duty.

Duty by whom to be collected.

XI. The duty on salt imported by land or sea from the territories of foreign powers, shall be levied by the persons employed in the collection, frontier and Sea Customs, whenever it may be practicable to employ those persons.

Persons employed in the collection of the duty to be furnished with the written authority for levying it.

XII. Persons employed in the collection of the Salt duty, shall be furnished by the local officers of revenue with a written authority to levy the duty the authority shall specify, the places where they are authorized to levy the duty, and also, the rate of duty authorized to be levied on the salt.

And an Official Seal.

XIII. Persons employed to collect the duty on salt shall be furnished with an official seal, on which shall be cut in the Telugu, Tamil, and Persian characters, the name of the Salt pans or stations at which they are authorized to levy the duty.

Rowannahs exempting the purchasers of salt from the payment of further duty to be granted them.

XIV. Rowannahs, exempting the purchasers of salt from the payment of further duty, shall be granted by the local officers entrusted with the collection of the salt duty, to persons paying the salt duty, and such Rowannahs shall have the seal of the respective Pans or stations annexed thereto.

Such Rowannah to exempt persons who have once paid duty from further duty.

XV. Persons having once paid the salt duty and taken out a Rowannah for the quantity purchased, shall be exempt from the payment of any further duty in the Territories subject to Fort St. George.

Collectors to furnish their subordinate officers with blank Rowannahs in the native languages.

XVI. Collectors of Revenue shall furnish the subordinate officers of Revenue, entrusted with the collection of the salt duty, with blank Rowannahs, or certificates in the native languages, and in the following form.

Seal.

Number of Rowannahs.	Date of issue.	To whom granted.	Quantity of Salt sold.	Where purchased.	Price paid for it per Madras garce, or 320 measures.			Rate of duty per Madras garce.			Amount of duty received.			On what laden.				Where going.	Remarks.
														No. of Bullocks.	Asses.	Bandies.	Coolies.		
			Garces		R.	A.	P.	R.	A.	P.	R.	A.	P.						

Rowannahs to be numbered.

XVII. Rowannahs shall be numbered in the English, Tamil or Teloogoo, and Persian languages.

And Registers of those delivered to subordinate officers to be kept, and returns of them to be required by Collectors.

XVIII. A correct register of blank Rowannahs, delivered to Officers entrusted with the collection of the salt duty, shall be kept by Collectors of Revenue; and a regular return shall be required by the Collectors in the form prescribed for the Rowannahs, from all subordinate salt agents, of the Rowannahs delivered to them.

Collectors to keep a Register of all salt Pans within their districts and of their produce.

XIX. The Collectors shall keep a register of all the salt Pans within the districts under their charge, containing the names of the Proprietors, whether Government or individuals, the average quantity manu-

factured at each, monthly, and the mode in which the produce is divided between the Proprietors and the Manufacturers.—Collectors shall reduce the number of places of manufacture wherein it may be practicable, without injustice to individuals, to abandon the manufacture.

Return of these registers shall be made by each Collector half yearly to the Board of Revenue.

XX. A Return of these registers shall be made by each Collector half yearly to the Board of Revenue, containing, in addition to the information noticed in the preceding section, an account of the quantity of salt sold at each Pan from the period of the last Return, whether for home consumption, for exportation by land or by sea, and a Statement of duties collected from each.

No salt to be made or sold at any places except those included in the Registers.

Penalty for the breach of the prohibition.

XXI. No salt shall be made or sold at any places except those included in the Registers of the Collectors, and all salt manufactured or sold in breach of this prohibition, shall be liable to confiscation, and a fine equal to the value of the salt be levied by the local Officers of Revenue, under the authority of the Board of Revenue, from the persons engaged in the illicit transaction, whether as Manufacturer, Buyer or Seller.

Salt imported at places where customs are received liable to the rules prescribed with respect to other merchandize.

Exception.

XXII. *First.* Salt imported by sea or land, at places where Sea Customs are received, or Chokies established for the collection of Frontier Duties, shall be liable to the Rules prescribed with respect to other articles of merchandize in Regulations XI. and XII. 1803, except that a Rowannah, in the form directed in the XVI. Section of the present Regulation, shall be issued instead of the usual Rowannah.

Salt imported at places where customs may not be collected to be conveyed to the nearest station where salt duties are collected.

Second. Salt imported by land or sea at places where customs may not be collected, and where frontier chokies may not be established, shall be conveyed to the nearest station where salt duties are collected, and regular Rowannahs obtained for the quantity imported.

Collectors and their officers in what manner to proceed on receiving information of any illegal manufacture or importation of salt.

XXIII. *First.* The Collectors and their Officers entrusted with the collection of salt duties, on receiving information of any salt having been illegally manufactured or imported, in breach of the prohibitions contained in Sections XXI. and XXII. are empowered to attach the same, without giving previous notice to the Judge or Magistrate of the district, or, if they shall deem it necessary, they may apply to the Magistrate, or any of the Darogahs of Police, to assist them in seizing

the salt, and on such application being made, the Magistrate or Darogah shall afford the assistance required.

Seizures of Salt to be reported to Collector.

Second. Officers of the Collector making seizures of salt, are to transmit without delay, and by the most expeditious mode of conveyance of which they can avail themselves, a report of the circumstances of the seizure to the Collector. If the Officer seizing the salt shall make any unnecessary delay in forwarding the required report, or shall omit to forward it, he shall be liable to a prosecution in the Dewanny Adawlet for damages by the proprietor, and to dismission from office, and to forfeit to Government any reward he might be entitled to in the event of the salt being confiscated.

Salt once seized not to be released without Collector's orders.

Third. Officers of the Collector shall not release any salt they may have once seized, without orders from the Collector, who may order any salt seized by his Officers to be released, if he be of opinion, on enquiry, that it is not liable to confiscation, but he shall invariably report the release of the salt to the Board of Revenue.

All seizures of salt to be reported to the Board of Revenue.

XXIV. In all cases where seizures of salt may have been made, the Collector shall transmit notice of the seizure, and all the circumstances relating to it to the Board of Revenue with all practicable despatch and proceed according to their directions.

Who are to determine when the salt be liable to confiscation, and if they shall order it to be released, the seizers liable to be sued for damages by the proprietor at his own risk.

XXV. The Board of Revenue, shall determine when the salt be liable to confiscation and if they shall order it to be released, the seizers shall be liable to be sued for damages in the Dewanny Adawlet by the Proprietor of the salt; and the person having made the seizure shall defend the suit at his own risk.

Or if the Board of Revenue shall approve the conduct of the seizer, they may indemnify him for the consequences of the suit, or order it to be defended on the part of Government, or adjust the matter with the proprietor.

In such cases however, the Board of Revenue, if, on a consideration of the circumstances and the conduct of the person by whom the seizure may have been made, they shall deem it proper so to do, may indemnify him for the consequences of the suit, or order it to be defended on the part of Government, or adjust the matter with the Proprietors of the salt, reporting the measures which they may adopt to the Governor in Council for his information.

If the Board of Revenue shall be of opinion, that any seizure of salt reported to them is liable to confiscation, they shall confiscate it and proceed to the sale thereof.

XXVI. If the Board of Revenue on a seizure of salt being reported to them, shall be of opinion that it is liable to confiscation, they shall confiscate it and proceed to the sale thereof when it may be deemed advisable. Any person dissatisfied with their

Any person dissatisfied with their decision at liberty to prosecute Government.

decision, shall be at liberty to prosecute Government in the Court of Dewanny Adawlet of the Zilla in which the seizure may be made in the mode prescribed by the Regulations.

Proceeds of sales of salt confiscated, and amount of fines levied, how to be disposed of.

XXVII. The proceeds of sales of salt confiscated by order of the Board of Revenue, and the amount of fines levied, shall be divided as follows: one fifth to the Officers making the seizure, two fifths to the person or persons on whose information the seizure may be made, and two fifths to the Company.

Copies and translations of this Regulation to be fixed up in all places where salt duty may be collected.

Collectors neglecting to publish the Regulation liable to be sued by any person whose salt may be confiscated, or who may be fined for the recovery of the amount.

XXVIII. Copies of this Regulation, with translations in the Persian and the several local dialects, shall be publicly fixed up in all Chokies, and places where salt duty may be collected. If any Officer entrusted with the collection of the salt duties shall neglect to publish this regulation in the mode here directed, any person whose salt may be confiscated, or who may be fined under this Regulation, shall recover from that Officer the value of the salt, and the amount of the fine on proof, in the Adawlet Court, that translations of the Regulations were not fixed up previously to the confiscation taking place, or the fine being levied.

In districts where no Zilla Court has been established, Collectors to conform to the principles of the Regulation.

XXIX. In Districts where no Zilla Court has been established, Collectors shall conform to the principles of the Regulation, as far as it may be practicable for them to conform.

B

MINUTE OF MR. FALCONAR.

On the Salt Revenue of the Company's Territories subject to Fort St. George; the policy of establishing a Monopoly of that article in preference to leaving it free, of collecting a duty in addition to the usual selling price; and pointing out the important improvement, in a financial view, of which it is susceptible.

1. So long ago as the month of October 1803, I had occasion to state to the Board, in the fullest manner, my sentiments with regard to the best mode of administering the Revenue derivable from Salt.

2. I observe that the Board, in the arrangements now proposed by them, have adopted some of my ideas; but differ with me in an essential point, on

which, in my mind, the prosperity of the revenue derivable from Salt principally depends.—We agree in the eligibility of augmenting the receipts of Government from this source, rather by levying a reasonable duty, than by imposing an increase of price; but differ as to the expediency of *monopolizing* the manufacture and sale of the Salt on which the duty should be levied.

3. The Board contend that "the adoption of a Monopoly by the Company would be an infringement of the hereditary privileges of Merasidars, "whose rights must in consequence be resumed, and that much difficulty "would attend the adjustment of a fair compensation to them."—and

4. "That a Monopoly would be impracticable and impolitic with respect to the Salt of foreign settlements."

5. Now it appears to me, *First,*—that the position assumed by the Board, in favour of Merasidars or Cultivators, is repugnant to a fundamental principle of the permanent system of revenue,* which recognizes no proprietary right as inherent in Merasidars, and expressly reserves in the hands (Salt.) of Government this source of revenue.

6. *Secondly*—that granting to Merasidars or Cultivators, the fair price of the full extent of their Salt, would be a mode of compensation not only extremely just and easy to be effected, but highly advantageous and acceptable to them, inasmuch as it would give them a certain, in lieu of a precarious, income.

7. *Thirdly,*—that the practicability and policy of a Monopoly, as relates to the Salt of foreign settlements, is in favor of the adoption of the measure.

8. *Fourthly,*—that it appears to be the only efficient mode of deriving an increased revenue from Salt.

9. And, *Lastly,*—I shall add some general observations elucidatory of a subject so important; an enlightened discussion of which may contribute essentially to the augmentation of the Company's finances.

10. I proceed to the illustration of these positions.

11. *First*—The branch of the public finances derived from the Manufacture of Salt has long appeared to be susceptible of much amelioration, it has hitherto been so inconsiderable, not exceeding, I believe, Star Pagodas 44,000 per annum,† as to justify every attempt to improve it, little loss can ensue from the experiment; and it appears to be very practicable to render it a source of much gain.

12. It was proposed in 1795 that an extended importation of salt from the Northern Circars should be made annually into Bengal; provided it could be done without impairing the large Revenue annually realized there from the

* Regulation XXV of 1802 &c. &c.

† 63,000 Star Pags, Gross Revenue 44,000, after deducting expences.

sale and manufacture of that article; but, as it was then apprehended that the adoption of the measure, to any extent, might injure the salt revenue of Bengal, it was soon after abandoned.

13. The Board of Revenue subsequently, in September 1799, recommended to Government* a more efficient and less objectionable scheme, viz.—the policy of securing to the Company the *Monopoly* of Salt throughout the Peninsula, in like manner as now obtains in the Provinces of Bengal; and, although very material obstacles to the measure at that time existed, from the divided authorities and collision of interests in the Carnatic, yet it was considered to be practicable notwithstanding; and the expediency of the proposition† was deemed to be so important, that an annual equivalent to the Revenue derived from this source by the then Nabob of the Carnatic and Rajah of Tanjore, was proposed by the Supreme Government to be paid in money to those Princes, provided they relinquished to the Company the exclusive privilege of manufacturing and selling salt.

14. The Treaties of Tanjore and the Carnatic happily obviated the difficulties which had till then opposed this important arrangement, by transferring these valuable dominions and, consequently this inherent prerogative, to the Honorable East India Company.

15. In the further prosecution of this object it was proposed by the Board of Revenue that, on the introduction of the permanent assessment of the land revenue and transfer to the respective landholders of the proprietary right in the soil, the revenue arising from the manufacture and sale of Salt, Salt Petre &c. should be excepted, and retained exclusively in the hands of Government; that on assessing the Jumma of the Estates of proprietors, who should thus lose the privilege of manufacturing or selling Salt, the amount of the salt revenue should first be deducted from the gross produce, and a proportion of one-tenth part of the net produce from salt, be allowed them, as their Malikana, or proprietary portion of that article.

16. These principles having been approved by the Governor in Council,‡ and by the Supreme Government,§ were finally recognized and enacted into a Regulation‖ of this Government on the 1st January 1802—by which "Government reserves to itself the entire exercise of its discretion in continuing or

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* To Govt. 2nd Sept. 1799.

† See paras 456 and 457 of Board of Revenue's letter to Govt, 2nd Sept. 1799.

‡ Letter of Govt. to the Bd. of Rev. Jan. 1800.

§ Ext. para 100 of the Govr. General in Council's letter.
"The Governor General in Council is of opinion that it would not be the less advisable, to "retain *exclusively* in the hands of the Company, the manufacture of Salt *in every part of the "territories*, under your Lordship's Government."
From Bengal 31st Dec. 1799, paras 96 at 101.

‖ Reg. XXV. A, D. 1802 Section IV.

"abolishing, temporarily or permanently, the articles of revenue derived, according to the custom and practice of the country, from *salt*, saltpetre, "customs &c., exclusively of which the permanent assessment of the revenue "has been made."

17. Here is no reservation in favour of any class of subjects:—the exclusion is absolute. The Merassidars alluded to by the Board are the native, hereditary, manufacturers of Salt, or inhabitants with the conditional occupancy and usufructuary privilege of lands in which Salt is manufactured, by labourers hired for the purpose.

18. I protest I am uninformed of any preference due to the claims urged in favour of these Salt manufacturers, before the more legitimate pretensions of the native chiefs of the country—the Rajahs—Poligars—and Zemindars, who have been unequivocally divested of their ancient rights in this respect.

19. Whatever weight be due to the opinion of the present Board of Revenue, against the policy of a Monopoly, which, after mature deliberation, had been recommended by a former Board,* been adopted by this Government and finally confirmed by the Governor General in Council,† I am sensible that a measure so sanctioned can derive little support from the coincidence of my humble vote; but, unless warranted by the strongest deductions of reason and sanctions of experience, I profess, that I should not have expected to see doubted the expediency of an arrangement, which, independently of the intrinsic evidence of its propriety, had obtained the formal sanction of a general law,‡ and been made a specific condition of every individual Cowl,§ issued by Government to the newly constituted proprietors of land. The experience of a long series of years has demonstrated that we cannot derive a large revenue from Salt, if the trade be kept open; whilst reason and experience combine to prove that a Monopoly, as in Bengal, would be highly productive.

20. In my humble opinion therefore, the arguments of the Board against the adoption of a Monopoly, founded on the interference it would occasion with the hereditary rights of the Merasi manufacturers, are repugnant to an established principle of the permanent system,‖—incompatible with the prescribed policy of Government¶ as relates to the mode of administering the Salt revenue; and calculated to oppose a considerable augmentation from this source of our finances.

21. *Secondly.*—With respect to the difficulty of adjusting an indemnification to the Merasi manufacturers of Salt, it appears to me so easily obviated, that I am surprized it should have been viewed in the light of a "*serious objec-*

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* To Govt. 2nd Sept. 1799.
† From Bengal 31st Dec. 1799.
‡ Vide Reg. XXV. of 1802 above referred to.
§ Vide Article 4th of the Sunnud-i-Milkeut Istemrar, or new Deed of Permanent Right.
‖ Reg. XXV. Anno. 1802. and Reg. XXXI. Anno. 1802.
¶ Reg. XXXV. Anno. 1802.

tion."—It is notorious that the Salt manufactured far exceeds the demand; that, besides the uncertainty of the demand, affected as it is by various causes, the Salt of the manufacturer, if not immediately sold, is obnoxious to damage from rain, to waste, and to loss; the Salt being manufactured expressly for sale, it is indifferent to the manufacturer who may be the purchaser.* He is apprehensive merely lest it remain on his hand. Now, if Government agree to purchase his Salt in all seasons, at a certain price, he derives a security from contingencies which he did not before possess: this security stimulates his industry and cheers his labour. The actual, or the reputed, extent of his manufacture should be the bound of his demand, and the rate of commutation should be the price in the market. This rule is alike applicable to Enâámdars, Russumdars, Yeomeahdars and others, enjoying fees, benefices or eleemosynary allowances, payable in kind from the Salt manufactured, and appears to me, as it did to our superiors, to be a very easy mode of dissipating the "serious objection"† apprehended by the Board with respect to the compensation to be made to the Merasi manufacturers. I observe that the late Special Commission were duly impressed‡ with the propriety of establishing a Monopoly, and reserving in the hands of the Company the exclusive manufacture and sale of Salt, in conformity with the principles and orders§ to which I have alluded, and that they expressly prescribed the mode in which the Merasi inhabitants and manufacturers were to be compensated, which was precisely that now recommended by me. The levy of a duty, over and above the price, would effectually obviate the frivolous objection adduced from the letter of the late Collector of Western Pushcush;‖ an objection which, I believe, was not urged, and does not apply to either of the propositions now in discussion, being made against the plan then proposed, for raising at once the selling price of Salt from 6 or to 30 Pagodas, per garce.

22. *Thirdly.*—The Board anticipate another difficulty to the adoption of a Monopoly from the possibility of the French, Dutch or Danish Nations being guaranteed by treaties in the privilege of manufacturing, selling and exporting Salt, and the consequent difficulty of excluding them from a competition with the Company.

23. It is probably unnecessary for me to inform the Board that the only privilege of this nature possessed by any of those powers, was that granted to the French nation by the treaty of Paris, for importing into, and vending in, Bengal, 2 laks¶ of maunds of Salt from their pans at Pondicherry and Karrikal. They did possess the means of making Salt at these

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* In 457 para. Board of Revenue's letter to Govt. 2nd September 1799.

† See report above referred to and letter from Bengal 31st December 1799.

‡ See 2nd para of their circular letter to Collectors, dated 29th September 1802.

§ Circular to Collectors, dated 29th September 1802.

‖ From Mr. Stratton, dated 28th December 1802.

¶ 1640 Garces.

places and at Yanam. I believe little or no trade of this kind was ever carried on by the Dutch or Danish nations. At present no political difficulties exist with respect to any of them.

24. In the event of a future pacification with the two first of these Powers, if it should be deemed superfluous to stipulate for the continuance of their exclusion from the sale of Salt in the Company's territories, nothing can be more easy, isolated as their territories are, than by the levy of a duty, the interdiction of the transit, or the policy of our internal economy, to prevent their interference from impairing the advantages derivable from this article.—Thus, the formidable difficulties apprehended by the Board, from the salt of Foreign Settlements, appear to be capable of the most facile removal; and the practicability and policy of a Monopoly, as relates to the salt of foreign settlements, is in favour of the adoption of the measure.

25. *Fourthly.*—The establishment of a salt Monopoly, besides being sanctioned by the advice, and corroborated by the example, of Bengal, seems to be the only efficient mode of deriving an increased revenue from salt.—This article is now so generally manufactured, that it is not much more valuable than sand. The quantity estimated to be annually made at the present pans, exceeds the estimated quantity annually sold, nearly half; and the quantity manufactured annually it is possible to double. It is from this facility of manufacture, and freedom of sale, that the Revenue of this Presidency from its salt, contrasted with that of Bengal from the same source, is so discreditably trifling. Why may we not, by a similar policy, derive advantages comparatively similar? Experience has demonstrated that these advantages can never result from the present supine system of administering the salt revenue. The Board of Revenue propose to throw open the trade, to continue this system, whilst, by the levy of a duty, in addition to the former price, they multiply the temptation and increase the facilities to smuggling.

26. If the manufacture be free, an equal or a larger quantity may be expected to be prepared, but the open demand will most likely be diminished by an augmented price. In proportion to the quantity prepared, will smuggling be facilitated, the duties eluded, and the revenue impaired. The quantity estimated to be annually made is supposed to be twice as much as is purchased; the expense of manufacture is consequently doubled, the facility of illicit sales increased, the probability of waste, and the actual loss, much augmented: limiting the manufacture therefore, whilst it would diminish the expense and decrease the risk, would also considerably enhance the value. I would beg leave to recommend that this limitation should be proportioned, as nearly as practicable, to the annual demand: that *one general Agent* should be appointed to superintend and regulate the whole detail, whose pay or commission ought to vary with the amount of the Salt revenue. The Collectors of land revenue, who cannot themselves, owing to their other avocations, sufficiently attend to this important department, might be of great assistance by an effectual

co-operation with the Agent; and the illicit preparation, vend, export, import, or transit, of Salt, should be effectually restrained by adequate regulations.

27. *Fifthly.* It remains for me next to endeavour, as I proposed, to illustrate this important subject by such general observations as have occurred to my mind on an attentive consideration of it.

28. It may be useful to enquire how far it is practicable to improve the revenue derivable from Salt, without discouraging the Brinjaries and Corchewars, the itinerant Traders of the Country, by too sudden an increase of price, diminishing the comfort of the people, or inducing them to the alternative of resorting to other marts, or substituting earth, for Sea, Salt.

29. In discussing this general head it will tend to greater perspicuity to divide the subject into the following branches.

30. *First.* The quantity of Salt usually manufactured from the present pans, and to what degree the manufacture is capable of being extended.

Secondly. The quantity consumed within the territories subject to this Presidency and exported by Sea and Land.

Thirdly. The extent to which the Revenues might be increased, calculating on the probable population, and on clandestine manufacture and sale being effectually prevented.

Fourthly. The rate of duty which it may be expedient to impose.

31. *First.* By statements prepared in the year 1795, it appears that the Salt annually manufactured at the pans then worked was 21,278½ Madras garces, and that it was practicable to augment the manufacture to the extent of 31,958 garces more, making an aggregate of 53,236½ garces. By more recent statements, there is reason to believe that the manufacture might be extended in a still greater degree.

Garces.
31,958
21,278½
53,236½

32. *Secondly.* By the same Statement of 1795, it is estimated that about 3,752 garces are consumed *within* the Company's territories subject to this Presidency; that 4,524½ are conveyed inland by the Brinjaries &c.; and we may calculate the annual exports by sea at about 4,00,000 of maunds, or 3,280 garces; making an aggregate disposable quantity of 11,556½ garces, and leaving a residue of the quantity ordinarily manufactured of 9,722 garces.

Garces.	*Garces.*
3,752	21,278½
4,524½	11,556
3,280	9,722½
11,556½	

33. *Thirdly.*—The consumption of Salt as a necessary ingredient in human food can be very little affected by a large or small price. The quantum consumed by each individual is but trifling; that quantum he must have, however dear, and however cheap he will rarely be induced to buy more. It is given by the natives in considerable quantities to their Cattle. An inferior kind, when it can be procured reasonably, is often used by them to

cure, or salt fish and to form a compost for their lands; but, except as manure for lands, and as an ingredient in the food of man and of cattle, it is scarcely used for other purposes. Whilst therefore the number of inhabitants and cattle in the Peninsula remains nearly the same, there will not be much variation in the consumption of Salt. Canara is the only acquisition we have made since 1795 that opens to us a new market; but it is of little importance. All our new territories above the Ghauts, while under the dominion of Tippoo, late Sultan of Mysore, and those of Nizam-ali-Khan, late Subahdar of the Dekkan, derived their supplies from the Coromandel Coast. Although therefore, these territories have fallen into our hands, the consumption of coast Salt cannot be thereby increased.

34. The Brinjaries and Corchiwars, by whom Salt is carried from the coast, were always encouraged by those native powers, more perhaps than by us, because they had been longer acquainted with the benefits rendered by these itinerant traders in times of war.

35. The only circumstance attending our acquisition of territory that is likely to increase the consumption of coast Salt, is the chance of a longer enjoyment of internal tranquillity; for in war, the Brinjaries being chiefly employed by the contending armies, carry less Salt from the coast: but, as the consumption continues the same, the deficiency of Sea Salt is supplied by that which is extracted from the earth in the inland districts.

36. In their report of September 1799, the Board of Revenue state that they had no satisfactory data by which they could calculate the population of the Company's territories, including the conquest of 1792, the dominions of the Nabob of the Carnatic, and those of the Rajah of Tanjore. They nevertheless concluded, from the extent of the provinces, that the population rather exceeded, than fell short of, ten millions.

37. Assuming the quantity of Salt annually required by each individual at 12lbs, they estimated the whole annual consumption at 12,000 garces, and, computing on an increased price, (per Madras garce, 30 Star Pagodas,) calculated on an annual gross revenue from Salt of 3,60,000 Star Pagodas. From this however should have been deducted the shares of the Mirassee and other manufacturers' maniums, russums &c.

38. From documents on the records, I imagine that the population, as above stated, is taken on too low a scale, whilst the annual quantity of Salt consumed by an individual is perhaps rated rather high.

39. By Returns made to the Board of Revenue in 1802, the population within the Company's territories only amounts to nearly ten millions: but the population which is supplied with coast Salt is perhaps nearly twice that number; for besides the inhabitants of the British territories, a great proportion of the population of the Mahrattah States; those of the Dominions

of his Highness the Nizam, and of the Rajah of Mysore, are furnished with this necessary article from the Cottars (Pans) of the coast.

40. The estimated consumption of an individual, according to the calculation of 1795, was, on an average, 12lbs per annum. In Bengal it is supposed to be 9lbs each per annum. The Natives on the Coast have a mode peculiar to themselves of calculating this quantity. They allege that the proportion of one-thirtieth part of the rice, is equal to the whole quantity of the Salt, which is necessary for the consumption of an individual in a month: i. e. if an individual, in a month, consume 30 seers of rice, he will require in the same time one seer of Salt. But this mode of calculation is so indefinite, and evidently so exaggerated, that it cannot be admitted in a calculation of this nature. By it the consumption of an individual would exceed 24 lbs per annum. This I apprehend to be far beyond the truth; since, by the following calculation of the average consumption of a family of twelve persons, among the respective classes of the natives of the Peninsula, each of which class, it should be observed, uses this article in a different ratio from the other, the average quantum required by one person may be more exactly deduced.

A family of twelve Brahmins consume.	per Mensem	6	Seers;	per Annum	=72	Seers.
Do. of Rachwars and Rajputs.....	per	do. 5	do.	....	do. = 60	
Do. of Rayets ...	per	do. 4½	do.	....	do. = 54	
Do. of Musulman	per	do. 3	do.	....	do. = 36	
48 people.		do. 18½	do.	....	do.=222	

41. Hence it is observable that four families consisting of forty eight persons, some of them Mahommedans, and the rest proportions of the higher and lower order of Hindus, will consume in a year 222 seers of Salt, which makes the annual quantum requisite for an individual, about 9 lbs. 10 oz. avoirdupois.* This corresponds with the average rate of consumption in the Bengal provinces; and, as it is unquestionably the most natural mode of computation, should therefore be the most accurate.

42. It is proper, however, to remark here, that the quantity necessary, as above stated, is when no earth Salt is used†—where it is made,

Seers.
* 222
2lbs each

48÷462

9lbs 10 oz.

† N. B.—The process of extracting Salt from the earth is different in different parts of the Country. Above the Ghauts, it is produced by lixiviating earth impregnated with salt. They pour on the earth a sufficient quantity of water to dissolve the Salt.—A liquid, in no respect differing from sea-water, (except as it may be more or less highly saturated) is thus

the Rayets use it in the proportion of 3 to 1 of Sea-Salt, and the other classes in the proportion of 1-5th or 1-6th to one.

43. Assuming, therefore, 9½ lbs to be the annual consumption of Salt by an individual, computing the population of the territories subordinate to this Presidency at ten millions, and calculating the inhabitants of other states supplied with Salt from the coast, at five millions more, (which I consider to be a moderate calculation); the home consumption, according to this hypothesis, would be 9,500 garces, and the foreign, 4,750; making an aggregate of 14,250 garces, independently of what may be used for cattle, salt provisions, and land; and exclusively of exportations by Sea, to which last point I shall now advert.

44. The only marts for Salt exports by Sea are Bengal, Canara, and the West coast of Sumatra.

45. The exportation to the former by Contract is generally limited to four or six laks of maunds;* and that, by Permit, I believe, scarcely exceeds one lak of maunds.

46. Canara is supposed to produce annually about 1,247 garces, and to import from Bombay, Goa, and Malabar, about 622, making an aggregate of 1,869 garces, whence are supplied the inhabitants of Canara, Sunda, the Mysore, and the contiguous districts of the Mahrattah State.

47. Both in Canara and in Malabar, landed property is on a different footing to what it has been considered to be in the other territories subject to this Presidency. There, the greater part of the Salt pans is, and for a long series of time, has been, deemed to be the hereditary property of the Jellenkars or native land holders; and it may be expedient, for the present,

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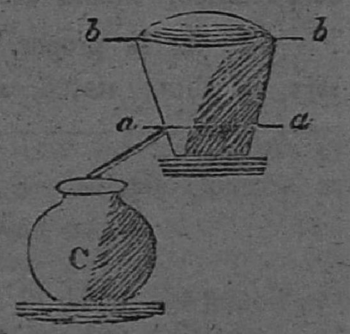
obtained and must be treated either with artificial or solar, heat, until the aqueous part evaporates—pure Salt remains. In Mysore they form of soft tenacious clay, a vessel, or rather a cavity in the earth, lined with this clay in the form of an inverted cone. From the bottom of this vessel a bambu tube, dipping in a slight degree from the horizontal line, conveys the lixivium to a large earth vessel (C) to the depth represented by the line (*a-a.*) Dry weeds or straw, *in strata*, crossing each other, are laid. The earth, impregnated with salt, is then put in to the height of about (*b-b*)—and lastly, common water. The weeds at the bottom operate as a filter, and the lixivium is received into the vessel C, perfectly transparent. It is then carried to a common iron boiler, to be evaporated at Colar. The salt being combined with a large proportion of Magnesia is exceedingly bitter. To the Southward of the Cavery it is very pure, the bitter scarcely perceptible, a small quantity of Magnesia is combined with the muriatic or marine acid which exists in all sea-water. This is dissipated by solar evaporation.



	Maunds.	*Garces.*
*	4,00,000	=3,280.
	6,00,000	=4,920.

to have things there, as heretofore, until matured arrangements for the landed property, the Salt, and Custom Revenue, shall have been determined upon: (unless the Jellenkars should be disposed to acquiesce in the general arrangement respecting Salt). Meantime the Collectors, under the control of the Board of Revenue, can take such measures with regard to this Salt, as may be proper, and least likely to interfere with the general arrangement.

48. By restraining strictly the Foreign imports and exports by Sea and Land, except on account, or by authority, of the Company, levying a duty, and procuring a remission of duty on Salt passing through the Mysore territories, the revenue from this article is capable of much improvement in Canara and Malabar.

49. Formerly large quantities of Salt were exported from the shores of Coromandel, to the west coast of Sumatra and Achin—but, it is said that some native manufacturers from Porto Novo and Nagore, having been induced to proceed to the Sumatra coast, instructed those Islanders in the mode of manufacture; which circumstance has rendered our Salt exports thither, in these days, very inconsiderable. Besides, it is a question whether it were possible to raise the price to these transmarine purchasers, to any considerable amount, without endangering the loss of their trade by inducing them to resort to other markets.

50. Assuming the consumption in the Peninsula supplied from the Company's pans, to be 14,250 garces,* the exports by Sea to be, moderately speaking, 3,280 garces, the annual demand, or the quantity to which the Sales might be extended, will be about 17,530 garces; but as there would be a wastage in so large a quantity of, say 10 per Cent, the provision might be authorized of 19,283 garces.†

51. *Fourthly.* I now proceed to the fourth point proposed for discussion, viz: the amount of the duty which it would be right to impose.

52. It is obvious that the safer mode of proceeding is to increase the duty, by degrees, from a low rate to a higher, because by too sudden an increase, the people might be compelled to use a greater proportion of earth salt as a substitute, than they do at present.

53. The Sale price at the pans is, on an average, about Star Pagodas 6 and 6 fanams, per Madras garce.

Garces.	
* 14,250.	Inland Consumption.
3,280.	Export by Sea.
17,530	
1,753.	Waste
19,283.	Necessary annual provision.

† N. B.—Probably some allowance should be made for the consumption of Earth Salt, which, in foreign territories, and in the interior of our own, cannot be restrained.

54. Supposing then, that an addition of 20 Cash per seer, or 20 fanams per bullock-load of 80 seers, were levied as a duty, in addition to the usual selling price at the pans, this, as I shall proceed to shew, would be but a moderate assessment, and would produce a very considerable accession to the revenue. The expense to the inhabitants, in most places, would be enhanced in no material degree. If even 40 Cash additional were charged at the pans, the additional price would be felt only by that class of the community living near, or about 50 miles inland from the pans—but this can be no objection, considering the very trifling price of the quantum necessary for the annual consumption of an individual; "the prices under the native governments of this country were often 40 cash per seer higher than at present, without materially affecting the consumption; but, if 40 cash were imposed at once, it might lessen the demand. It would be right therefore, to confine it, for the first year or two, to half that rate at the utmost."*

55. It is necessary to the illustration of this part of the subject to remark, that the duty of 20 cash per seer would add to the selling price only 28 Star Pagodas and 24 fanams† per Madras garce, would enhance the annual expense of an individual's consumption 1 fanam and 11 cash, and, added to the average price of a garce at the pans, would make the annual expense of an individual for Salt, about 1 Madras fanam and 31 cash, prime cost.‡

56. Now, if a duty of 20 cash per seer§ were levied on 14,250 garces,‖ the aggregate quantity computed to be annually necessary for the consumption of those inhabitants of the Peninsula, who are supplied from the Company's pans,

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* Extract from a letter from Major Munro, 24th May 1803.

	Seer.	*Cash.*		*Seer.*
†If	1 :	20	::	4,800
		4,800		
	80)	96,000 Cash.		
	42)	1,200 Fanams		
		28 Star Pags. 24 Cash.		

	lbs	*Fs.*		*lbs.*
If	10,000 :	1,200	::	9½
		9½		
	10,000)	11,400		
		Fanam 1-11 $\frac{2}{10}$ Cash.		

S.Ps.	*Ch.*	
28 :	24.	Duty at 20 cash per seer.
6	6.	Average selling price.
34.	30	per Garce.

	lbs.	*S. Ps.*	*Fs.*		*lbs.*
If	10,000 :	34 -	30	::	9½
		42			
		1,458			
		9½			
	10,000)	13,851			
		Fanam 1-30 $\frac{8{\cdot}080}{10{\cdot}000}$			

‡ The prime cost of the same quantity, at the annual sales in Bengal, I have understood to be about six times this rate.

§ NOTE.—The duty of 20 Cash per seer is merely suggested as appearing capable of being paid at first, without being felt excessive and it is assumed as a means of calculation. Should a lower price be considered necessary, in the first instance, it would of course be imposed.

	Garce.	*Star Ps.*
‖ Home Consumption.	9,500 —	2,71,428
Foreign Do.	4,750 —	1,35,714
	14,250 —	4,07,142

it would produce an additional Revenue of 4,07,142 Star Pagodas,* exclusive of the Revenue derived from Salt exported by sea, calculated at about 11,081 Pagodas,† and the usual proportion of the selling price at the pans not included in the above, say 48,144 Pagodas.‡

57. If experience should prove that in a series of years this sum could with safety be doubled, *i. e.* that 40 cash per seer could be imposed without affecting the comfort of the people, it would be superfluous to point out the high importance of a vigilant attention to the easy improvement of this branch of the resources of the State.

58. But to the attainment of this object, it is essentially necessary in my humble opinion, to establish a Monopoly, rigidly to prevent the illicit manufacture, sale, export, import, or transit of Salt ; and this I apprehend cannot be effected, nor the extensive details of the Salt department managed with energy and circumspection, without a general Superintending Agent or Controller, with whom each of the Collectors of Land Revenue, the Judges, Magistrates and other public officers, should be instructed to co-operate, each in his particular department.

59. It would no doubt be more convenient to employ those Pans chiefly, which are most contiguous with the Passes to the Upper Country, and it might perhaps be expedient, in some situations, to establish depôts or stores, at a small expense inland.

60. I have prepared the outline of a set of Regulations founded upon the principles stated in this Minute.

61. *Finally.* Upon this subject I think it right to refer to the expediency of the proposition recommended in the 469 and subsequent paras: of the letter from the Board of Revenue to Government, dated 2d September 1799.

62. It thence appears that the Salt manufactured in Bengal is unequal to the consumption : that the charges of manufacturing Salt there, are estimated at Sicca Rupees 70-1-2 per 100 maunds.

63. Coast Salt is delivered at the Company's Golahs, at Sicca Rupees 57 on Permit, and on Contract at Sicca Rupees 67-14-2 per 100 maunds. The quantity can be increased to any extent to which freight can be procured, and the quality is capable of much improvement.

Garces.
* 14,250.
4,800 Seers.

4) 684,00,000 Cash.

42) 171,00,000 Fanams.

4,07,142 Star Pagodas.

S. Pags.
4,07,142 Duty at 20 Cash ℔ Seer.
† 11,081 Export to Bengal.
‡ 48,144 Proportion of selling price at the Pans.

4,66,367 Star Pagodas.

64. Hence a large augmentation of the coast Revenue appears practicable without diminishing that of Bengal: for if 10,00,000 (lacks) of maunds additional were imported from the Coast, instead of manufacturing that quantity, at greater expense in Bengal, it would be productive of the benefits of increasing our revenue, encouraging the Country Craft trade, and, at the same time, effect a small saving in the expense of manufacture.

N. FALCONAR.

Office of the Board of Revenue.
Dated 28th June 1804.

C (1)

Statement shewing the Quantity of Salt sold, with the Financial results from Fusly 1216 *to Fusly* 1262.

Monopoly Price.	Fusly.	Year.	Home, Inland & Foreign States, including French Government.	Exported by Sea	Total Sales.	Gross Revenue.	Charges, exclusive of advances.	Net Revenue.
1	2	3	4	5	6	7	8	9
		A. D.	In. Mds.	In. Mds.	In. Mds.	Rupees.	Rupees.	Rupees.
70 Rs.	1216	1806-7	28,71,120	9,87,960	38,59,080	19,94,439	7,23,056	12,71,383
”	1217	1807-8	36,51,000	13,33,440	49,84,440	24,39,194	7,97,610	16,41,584
”	1218	1808-9	37,21,560	13,99,080	51,20,640	23,73,816	4,62,567	19,11,249
105 Rs.	1219	1809-10	28,58,880	11,58,000	40,16,880	25,20,282	4,72,507	20,47,775
”	1220	1810-11	33,19,800	11,06,520	44,26,320	30,46,413	5,34,103	25,12,310
”	1221	1811-12	31,57,920	15,50,040	47,07,960	30,51,513	6,27,301	24,24,212
”	1222	1812-13	33,97,560	12,02,880	46,00,440	32,14,854	6,67,441	25,47,413
”	1223	1813-14	32,27,880	13,70,160	45,98,040	30,98,410	6,37,473	24,60,937
”	1224	1814-15	30,98,280	5,30,640	36,28,920	27,72,925	5,17,961	22,54,964
”	1225	1815-16	30,62,520	2,30,880	32,93,400	26,68,229	4,91,447	21,76,782
”	1226	1816-17	27,90,720	3,24,000	31,14,[illegible]20	25,21,199	4,46,367	20,74,832
”	1227	1817-18	32,01,600	4,58,520	36,60,120	28 50,456	4,92,831	23.57,625
”	1228	1818-19	33,73,560	6,60,720	40,34,280	30,44,898	6,30,822	24,14,076
”	1229	1819-20	34,35,264	6,90,608	41,25,872	30,86,675	6,40,066	24,46,608
105 & 70 Rs.	1230	1820-21	44,03,734	4,13,664	48,17,398	27,84,959	8,17,835	19,67,123
70 Rs.	1231	1821-22	48,17,340	10,59,636	58,76,976	30,54,765	9,92,327	20,62,438
”	1232	1822-23	46,25,069	9,47,805	55,72,874	29,42,106	7,67,527	21,74,579
”	1233	1823-24	46,21,540	10,97,406	57,18,946	29,47,503	8,94,857	20,52,646
”	1234	1824-25	48,70,670	10,30,415	59,01,085	30,36,763	8,07,142	22,29,621
”	1235	1825-26	51,76,027	7,29,194	59,05,221	31,80,664	6,60,639	25,20,025
”	1236	1826-27	45,55,973	7,94,484	53,50,457	28,30,585	6,94,092	21,36,493
70 & 105 Rs.	1237	1827-28	47,28,011	15,22,182	62,50,193	30,95,589	7,38,760	23,56,829
105 Rs.	1238	1828-29	42,00,514	5,80,383	47,80,897	37,47,480	7,23,523	30,23,957
”	1239	1829-30	44,49,558	6,58,820	51,08,378	40,14,619	7,54,568	32,60,051
”	1240	1830-31	41,16,387	6.54,114	47,70,501	37,80,760	6,19,314	31,61,446
”	1241	1831-32	41,55,029	5,53,290	47,08,319	38,12,201	7,57,480	30,54,721
”	1242	1832-33	35,63,208	13,59,935	49,23,143	34,63,969	6,57,202	28,06,767
”	1243	1833-34	42,53,700	23,80,274	66,33,974	41.92,551	7,58,846	34,33,705
”	1244	1834-35	41,36,327	16,80,890	58,17,217	40,70,632	7,61,477	33.09,155
”	1245	1835-36	38,89,220	6,96,164	45,85,384	35,96,767	6,55,066	29.41,701
”	1246	1836-37	39,36,900	6,64,761	46,01,661	36,42,403	7,38,836	29,03,567
”	1247	1837-38	44,44,327	62,957	45,07,284	38,60,865	5,41,309	33,19,556
”	1248	1838-39	45,40,196	2,28,373	47,68,569	39,78,662	5,47,176	34,31,486
”	1249	1839-40	45,57,281	2,41,329	4[illegible],98,610	39,88,101	6,75,387	33,12,714
”	1250	1 840 4	42,55,699	3,36,871	45,92,570	37,50,028	6,85,315	30,64,713
”	1251	1841-42	43,36 051	10,13,498	53,49,549	40,61,103	7,13,519	33,47,584
”	1252	1842-43	43,07,742	11,28,170	54,35,912	41,07,971	7,49,121	33,58,850
105 & 180 Rs	1253	1843-44	40,73,566	11,43,109	52,16,675	42,04,944	6,60,029	35,44,915
180 & 120 Rs	1254	1844-45	43,31,727	5,03,089	48,34,816	45,82,782	7,00,176	38,82,606
120 Rs.	1255	1845-46	45,61,673	4,67,478	50,29,151	46,37,552	6,84,064	39,53,488
”	1256	1846-47	46,23,162	4,25,350	50,48,512	46,74,928	5,77,286	40,97,642
”	1257	1847-48	46,42,729	4,41,509	50,84,238	46,96,714	6,83,738	40,12,976
”	1258	1848-49	47,14,247	3,93,038	51,07,285	45,55,548	7,40,252	38,15,296
”	1259	1849-50	48,47,004	4,33,155	52,80,159	47,18,198	7,89,545	39,28,653
”	1260	1850-51	49,68,271	2,51,576	52,19,847	48,06,596	6,55,707	41,50,889
”	1261	1851-52	52,21,653	2,48,400	54,70,053	49,00,962	6,57,589	42,43,373
”	1262	1852-53	51,94,713	92,066	52,86,779	49,94,124	7,04,356	42,89,768

Remarks. (10)

From the Board's letter to Government of 18th April 1822, it appears that the average of the five years preceding the Monopoly was—

Home and Inland.	Export by Sea.	Total.
Mds.	Mds.	Mds.
25,76,520—	5,56,800 —	31,33,320

W. H. BAYLEY,
Secretary.

C (2)

Fusly 1262.

	Gross Revenue.	Charges exclusive of Advances.	Net Revenue.
	Rupees.	Rupees.	Rupees.
Ganjam,..	3,68,418	25,787	3,42,631
Vizagapatam,................................	1,77,165	24,648	1,52,517
Rajahmundry,................................	2,48,375	22,211	2,26,164
Masulipatam,................................	1,41,617	13,552	1,28,065
Guntoor,..	5,88,290	43,512	5,44,778
Nellore,..	5,05,418	64,551	4,40,867
Chingleput,...................................	3,10,808	59,659	2,51,149
South Arcot,..................................	2,04,243	53,920	1,50,323
Tanjore,..	4,79,073	58,147	4,20,926
Madura,..	3,82,584	39,057	3,43,527
Tinnevelly,....................................	3,56,415	35,458	3,20,957
Canara,..	4,[illegible]9,642	99,871	3,59,771
Malabar,.......................................	3,20,741	93,007	2,27,734
Madras,..	4,51,335	70,977	3,80,358
Total...	49,94,124	7,04,357	42,89,767

W. H. BAYLEY,

Secretary.

D

Extract from a REPORT *from the Inspector General of Civil Estimates to the Board of Revenue, under date the* 21*st October* 1822.

Para. 10. "The state of the water, when introduced into the reservoirs or *Condams,* is a point of much importance. In order to its due estimation, I shall lay before you the result of a cubic foot of sea water employed in the making of Salt, considering it for the moment to consist of nothing more than the Salt obtained and the water evaporated; setting aside, as of little importance, its other component parts, which probably form the slime observable in the pans from time to time.

11. I have found by experiment, that the specific gravity of the coarse bazar Salt, after it has been well washed, is about 1·952,* water being 1. and as the specific gravity of Sea water may be assumed in these latitudes at about 1·0263;† it follows that of one cubic foot, or 1728 cubic inches of sea water, 1680¼ cubic inches must evaporate, and leave in the pan *only* 47¾ cubic inches of solid Salt, or about 2¾ per cent on the *bulk* of the

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* If pure it might not exceed 1·93

† It has been found here by experiment to be 1·02,818

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water. Hence it is of the utmost importance that the water reserved for the operations of the season should be the strongest procurable; and it is evident that the natives do not sufficiently appreciate this circumstance, since they do not regulate the time for commencing their operations by the tides or the freshes, which must inevitably affect the body of waters from which the supply is to be taken, to its advantage or disadvantage. For instance, if the supply be drawn from a lake or a backwater, the heavy rains, the freshes of rivers, during, or immediately after, the monsoon, must have weakened the waters essentially, and the quantity of Salt produced in the year with that water will be much less than if sea water had been employed. Hence, in such cases it is absolutely necessary that the time of drawing the water should be regulated by the first or second *spring tides*, which take place after the last rains, and which, communicating with the lake or the backwater, counteract, in a great measure, the effect of the freshes; and not by the occurrence of any feast or other special days.

12. It would not be attended with much difficulty or expense to furnish the Collectors with Hydrometers of a simple construction, which would shew the weight of pure water, of sea water, and of saturated brine; and they would be found of the utmost use in regulating the whole process.

13. I shall now observe, with respect to the tedious preparations detailed by Mr. Angelo, that the manufacturers do not appear rightly to understand the object and the effect of them, and that, in many places, this *routine* is gone through merely from usage; while, on the other hand, they are perhaps too careless in the essential part of that preparation.

14. I conceive the main objects to be simply these:—*First,* to secure, in reservoirs, as much water as is necessary for the service of the season, so that it shall not be affected by the external waters, from tides or freshes:—*Secondly,* to allow it to condense in these reservoirs, while the other work is proceeding, but not to that extent which would occasion a deposit of good salt in those reservoirs:—*Thirdly,* to form the floors of the *beds,* level, and to render them as impermeable as possible.

15. It may here be observed that the importance of the reservoirs does not seem to be duly appreciated, although they are in general use, and the waters in them distinguished, by *nella,* fresh, *soodoo,* hot, and *karam,* strong; but in some places this distinction is almost nominal: for the waters are said to be passed from one to the other, in one or two days, as if one or two day's evaporation on that body of water, could alter it to any essential degree.

16. The Collector of Nellore however states it to be of importance that the water should be kept in the reservoirs *ten* or *fifteen* days at least, to get *heated* by the sun, before it is let into the pans. *Heated* is the Native expression and understanding of it, but *condensed* is more appropriate; and towards that effect, ten or fifteen days at the early part of the season, will not do a great deal.

17. With this view of the case then, I would suggest, that the first or *general* preparation should consist simply in forming the reservoirs, and securing them with sufficient banks; occupying three quarters of the land destined for a plot, or *allum*, of pans; to be divided into, at least, three equal tanks; and they should be filled the moment the water is of a fit quality to contain, the first, about three feet in depth, the second, two feet, and the third, one foot. They should communicate with each other at pleasure *from* the deepest, *to* the shallowest—the Pickottah or machine for raising the water being placed at the *deepest*, and moveable to the second. Ploughing will seldom be necessary, and the banks only will need beating down. They should be replenished occasionally as absorption is observed to prevail.

18. Till this operation is completed, the manufacturer's attention should not be given elsewhere; and if his tanks be well secured and filled with good water, his work is already well advanced.

19. Condensation being now in progress, the cultivator may take his time to form his *beds* well, levelling, watering, beating with rammers, and treading them alternately in the usual manner. To this he cannot pay too much attention; and if the natural soil be not favorable, his labour will be well paid, if, from any neighbouring spot, he gets a sufficient quantity of stiff clay to form his floors; (it should be well tampered, with enough of sand in it, to prevent much cracking). Finally, strewing fine sea-sand over it, and raising the dividing ridges.

20. I must here remark, that the water required for this process should on no account be taken from the tanks, but elsewhere—that of the tanks becomes daily too valuable to be thrown away in this work.

Plan A.

21. The shape of the beds given in the Plan may be varied according to circumstances, but on this principle, that they shall always be narrowest, in the direction of the strongest and most unfavorable winds.

22. The manufacturer will now let the water into his beds, from the shallowest tank, and as it condenses, scrape up the Salt. Here an essential question arises, as to the depth of water to be introduced into them, to the best advantage. The documents before me shew, that this part of the process is very various; but they do not contain all the particulars necessary to determine with precision, which is best. In some cases, $2\frac{1}{2}$ inches of water only, are introduced at a time; in other pans, 6 for each *scraping* or gathering; while in some places, the water is let in and evaporated alternately, in small quantities of 2 or 3 inches, 2, 4, or even 6 times, before any gathering is attempted.

23. It may, however, I imagine, be laid down as a principle, that the seldomer the floor or bottom of the bed is disturbed by scraping, the cleaner

and whiter the Salt will be; but, that on the other hand, too large a quantity of Salt remaining in the beds is liable to be, in some degree, damaged, or even destroyed, by sudden rains or inundations, while a thick layer of Salt may likewise retard evaporation.

24. It may also be argued, that the shallower the water remains in the beds, the less it will be affected by the winds, the higher its temperature will be, and the greater the consequent evaporation, to a certain extent at least; for I have found, that when the surface of the water approaches the surface of the Salt, the evaporation is greatly retarded.

25. Under all these circumstances, I would recommend the following medium process:—As soon as the beds are thoroughly prepared, two inches of water should be let into them from the third tank or *karam Condam*, and *every morning* afterwards, they should be replenished from the same source to that depth, till the 14th day. On the 15th, the scraping should commence, allowing the remainder of the water to evaporate while this operation is performing. After this, the beds should be cleared of slime, levelled and again beat and trodden, if necessary, proceeding in this manner to the end of the season. Mr. Angelo seldom notices the clearing away of the slime, but it appears to me to be an essential part of the operation.

26. Particular attention should be paid to the condition of the water in the *karam Condam*, which should always be kept in a state of condensation approaching towards saturated brine; and water added to it, when necessary, from the second, to be replenished from the first *Condam*.

27. The judgment of the manufacturer should also be exercised in keeping as much water in the three tanks, under the rule given, as may be required for the *whole season*, and *no more*. The second *Condam* should always be kept about two feet deep, the third, one foot, till towards the close of the season, when they should both, by degrees, be drained off into the beds.

28. I have already noticed that the details before me do not enable me to appreciate the extent of evaporation which takes place in the course of a season; and it is further to be regretted, that Mr. Angelo has not said whether the information given to him was taken from an average of good and bad seasons, or for the year in which he made his survey.—Taking the average, however, it appears, that in ninety days of the most favorable part of the season, there is a depth of water of fifty-eight inches disposed of in vapour, in Salt, and in absorption; or about 0·645 inches per diem; but that out of this quantity only 85¼ mercals are produced by each bed, one with the other, within that period, or 0·947* mercal per diem. Now, taking the average of 253 superficial feet for the area of the

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*(about 7½ measures.)

bed, 0·645 inches deep of sea water in it, ought to produce nearly 1.84* mercals; and therefore it follows, either that the water when used in the beds was very *weak* of Salt; that there was a waste of land in forming the beds, by their not containing the space assumed; that much rain fell in the beds—or, that they were overflowed from without; or, that much of the water put into the beds, was afterwards absorbed in the earth, from the floors not being sufficiently staunch.

29. But from an experiment made during the last and the present month, when the water exposed to the sun, was, in the middle of the day, at the average temperature of $98\frac{1}{2}^{\circ}$, the evaporation was 0·23 inches per diem, till the water arrived at the condition of *saturated brine*; but from the beginning of the evaporation to the complete formation of the Salt, it was only 0.182 inches per diem; now, if to this measure we add 0·43 inches only, two thirds of the greatest evaporation obtained before, (deducting one third for absorption by the earth), the mean evaporation throughout the season may then, I think, be fairly assumed at $\frac{0.182+0.43}{2}=0.306$ inches per diem, or 3-10th of an inch; and with this assumption I will here shew the result of the process I would recommend.

30. The reservoirs being prepared early in January, a favorable moment should be taken for filling them, as directed, with proper water, any time between the 15th and 31st of the same month, to be regulated by the season and the tides, and determined by means of a Hydrometer.—The *beds* should then be formed, in the manner prescribed, of the assumed average area of 253 superficial feet. This operation might take up the whole of February; and the beginning of March would be quite early enough to commence supplying the beds with water,

31. By this time, the water in the third, or *karam Condam*, would probably have acquired nearly double its density, and being let into the beds with that advantage, would yield a much more copious harvest than if taken immediately from the lake, &c.; being introduced *daily*, as directed, for fourteen days, and the evaporation operating upon it uninterruptedly for that period; by this time, 4·2 inches would have evaporated, (besides any small absorption which might still prevail,) which would have left behind it 8.962 cubic inches of *solid* Salt, or $25\frac{1}{3}$ mercals nearly; and as ten such scrapings might easily be obtained in the season, the whole amount would be 253 mercals per bed; and at the average of 44 beds per cawney, $27\frac{5}{6}$ garce per annum, instead of about $10\frac{5}{8}$ garce, the average of Mr. Angelo's statement.—But allowing 25 per cent for rains, wastage, &c, it will be reasonable to expect 20 or 21 garce, clear. The probability of which is support-

* ($14\frac{3}{4}$ measures.)

ed by the present produce of the Ennore old Pans, which, in the statement, is rated at 19.344, or nearly 20 garce per cawney.

32. To these remarks I would add, that after each scraping, (twice per month), the beds should be cleared from slime, &c, before the next flooding; that the Salt should be gathered by means of light scrapers or other implements without treading in the bed, and while it is still immersed in about an inch of brine. This last precaution tends not only to keep the Salt white and clean, but much time is also saved; the evaporation being quicker when the surface of the water is about one inch above the Salt. It should then remain on a raised corner of the bed (*not* on the bank) to dry, and for the brine to drain off into the bed, else there will be great waste. It is necessary to observe, that in forming the pans, the whole should be sunk below the natural level of the soil, or even below that of the bed of the lake, creek, or backwater, from which the supply of water is drawn; by this means much absorption will be prevented: but in that case the surrounding bank must be made sufficiently strong and high to prevent submersion from the tides or freshes. The beds should always be a few inches lower than the third *Condam*; but the first and second *Condams* may at pleasure be sunk as deep or deeper than the third, if that expedient be found to secure the work better; but then, the Packottah or basket must be used to bail the water out of them into the third, when required.

33. As to the means employed in raising the water into the *Condams*, the common Packottah may generally be considered the best. In some cases where the height is inconsiderable, the basket, or the *Dony-yeathon*, may perhaps be used with greater advantage. The latter is of the nature of the Dutch *Scoop*, and if it were made *double* like it, would be better still.

34. By either means the water required to fill the *Condams* of any one cawney *allum*, will be easily raised by two men in 10 or 12 days; after that, comparatively little will be required. It would be better, however, to have extra Packottahs and extra people, so as to fill the reservoirs in a shorter time: as the season advances no more water will be required.

35. In regard to the nature of the soil, I do not conceive that it can greatly or seriously affect the *quality* of the Salt. If it contain impurities, they are soon filtered or absorbed beneath the surface, during the preparations; but it may operate upon the *quantity* made annually, inasmuch as it may be more or less sandy or clayey;—unless clay be brought for the floors of the beds, as before recommended;—their level being below that of the neighbouring or surrounding waters, in any case.

36. The various colours which Salt seems to assume, is simply that of the sand or dust mixed up with it; for all of it becomes white, when, by

boiling and evaporating, it is brought to that state commonly called *table salt.* If, however, the manufacturer on scraping his beds would cast the Salt into *brine-tubs,* or even a *brine-pit* at hand for the purpose, he would, with little labour, clear it of almost all its dirt, and without *any loss;* provided only, that the brine were in a *saturated* state; this operation would be easy, and by using the common split-bamboo-sieve-basket, he might moreover rid it of any portion of its powder, and render his crystals more beautiful and valuable.

37. Some notice may here be taken of Mr. Angelo's observations, in which most of the Collectors also seem to concur, that the first scrapings do not produce salt of so good a quality as what is gathered in the heat of the season. When lately I was trying the progress of evaporation, I observed that when the sea-water had acquired a density of about 1·08, small brownish and soft* particles began to fall to the bottom of the trough, and continued to do so for a few days. After that, the quantity precipitated, did not sensibly increase; it looked like coarse white powder. At this time then, the cubic foot of salt water consisted of 1583 cubic inches of water with 145 cubic inches of solid salt; but the salt itself did not begin to form till the density of the brine was become as 1·239, and I never found it to exceed 1·247, the mean of which is 1·243,† when, therefore, there only remained 1287 cubic inches of water, to 441 cubic inches of solid salt, or nearly 3 to 1. This has reference to *bulk*; but in regard to *weight,* in the same cubic foot of brine weighing nearly 134¼ lbs. there was about 80 lbs 7 oz of water, to 53 lbs 13 oz of salt, or nearly 3 to 2. Now, as a mercal of salt weighs about 25 lbs, a cubic foot of sea-water contains $1\frac{7}{8}$ *measures only,* while a cubic foot of saturated brine holds suspended 2 mercals $1\frac{1}{4}$ measure nearly.

38. I am therefore led to conclude that the white powder which is precipitated at so early a period of the process, is not the common salt, but an impurity, or a foreign substance, which, having less affinity with water, quits it sooner. Hence it follows, that in the first operations, when the water is put into the new beds, before it has acquired much *density,* it is absorbed by the new floors, before it can deposit the real salt, or much of it, leaving behind it only that foreign or adulterating substance which is thrown away, or distinguished as *bad salt*; and hence also arises the necessity, or the expediency at least, of keeping the brine in the third or *karam Condam* a considerable time before it is used, and if it could always be kept there till the whole of that substance was precipitated, all the salt made would doubtless be of a superior quality.

39. The covering of the heaps seems essential, more as a protection against the sands, than the rains, where the heaps are not to remain the whole monsoon; the fusing of their surface by fire appears to be unnecessary, but this expedient might possibly be tried with success on the floors of the beds, wherever brushwood is at

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* When evaporated in a leaden trough they were larger and whiter.

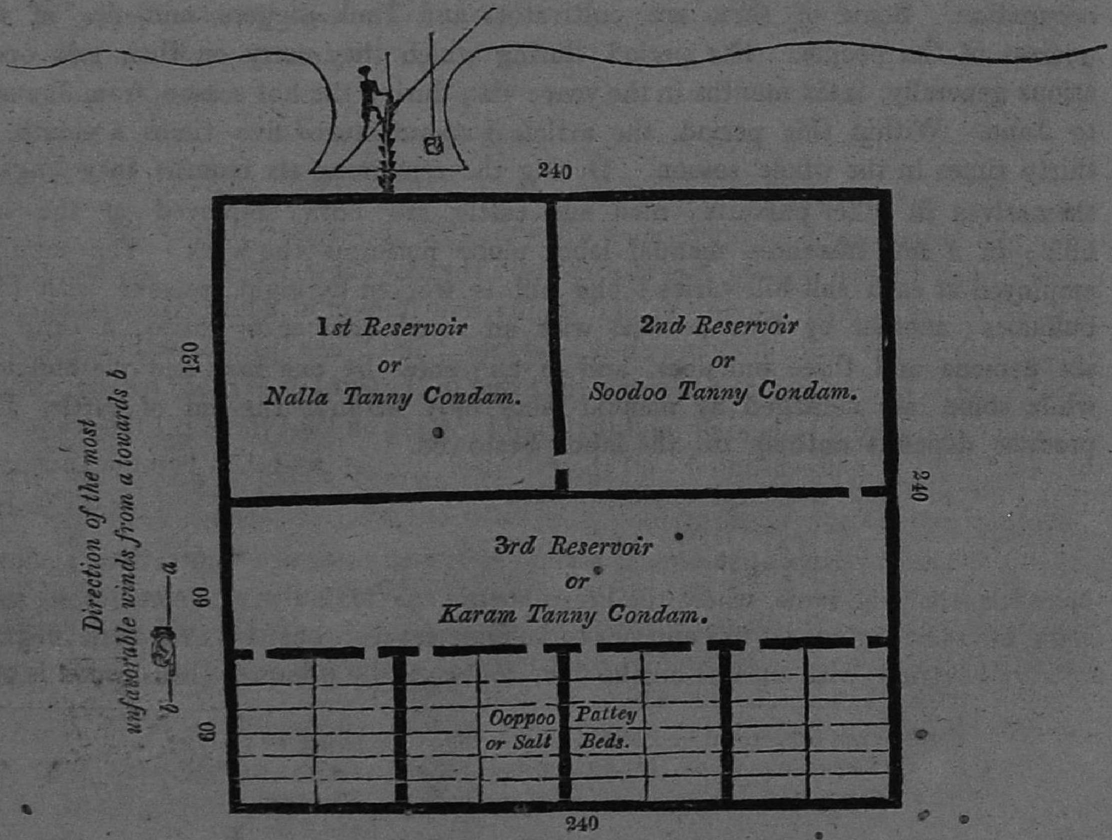
† The specific gravity of the Dead Sea is said to be 1.241.

hand. A small thickness of salt on their surface might, when thus fused, form a good crust to prevent the mud and sand mixing with the salt, and to diminish absorption.

40. Where the winds prevail with violence, the beds should be very narrow in that direction, and if there be no brushwood, or jungle, to afford shelter to the pans, straw or other tatties might be used with advantage. This will produce larger crystals.

41. When salt wells are employed in the manufacture of salt, attention must be paid to the nature and strength of their waters; some are superficially affected by the rains, and may require to have their upper waters drawn off and thrown away: others on the contrary have their upper waters more salt than those below, which should be rejected. Again, in very shallow lakes or backwaters, not much affected by rivers or tides, it may so happen, that as the heat increases, those waters may become more salt than what stands in the first or second Condam, in which, the former, should, of course, be substituted for the latter: these are details, however, which should occur, to every expert manufacturer, but he would be greatly assisted in them by a Hydrometer even of the most simple construction."

Plan of an Ullum, or complete set of Salt Pans, Comprehending one Cawny of Ground.



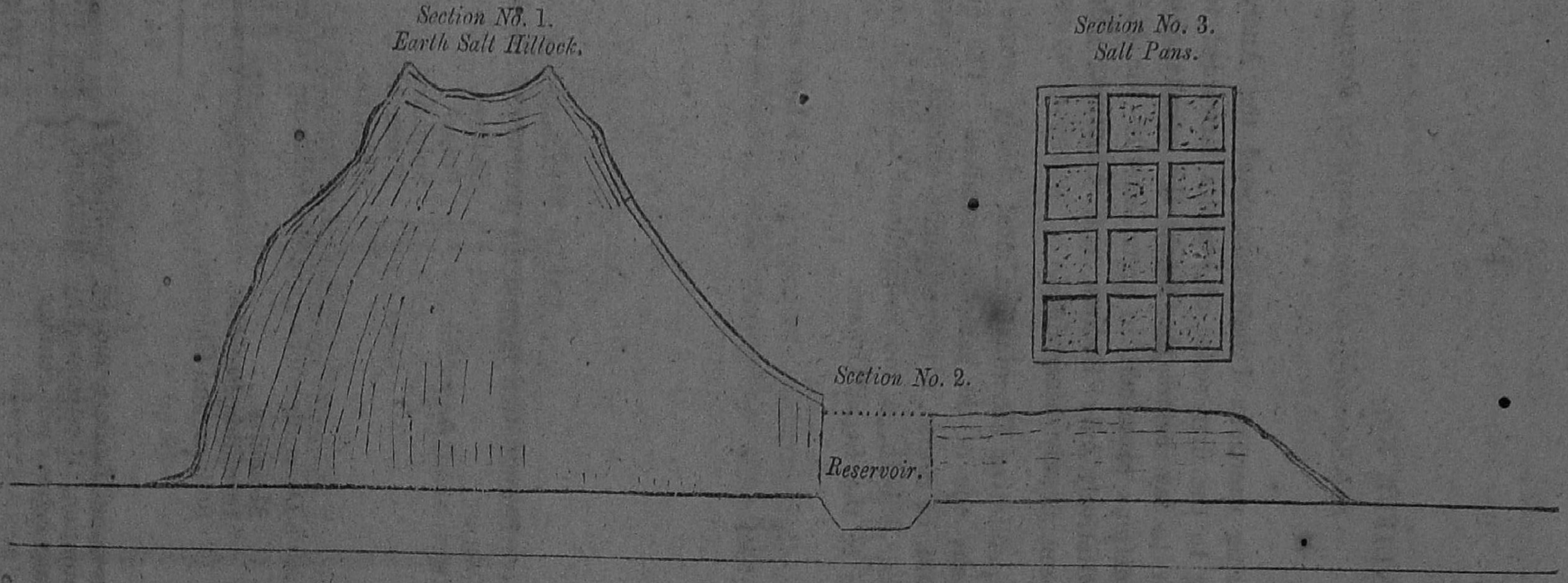
E.

Extract from a letter from the Acting Collector of Bellary, dated 15th March 1849.

PROCESS OF MANUFACTURE.

Para. 3. * * * For the manufacture of this Salt, mounds of common earth are formed to a sufficient height, about 10 to 20 feet. The summit is made hollow (as per Section I. in the accompanying Sketch) to receive earth impregnated with salt which is collected from in the vicinity and thrown into the hollow part, and water is poured on it, which then runs through a narrow drain into a reservoir (See Section II.), constructed of masonry, below in the rear of the hillock. The contents of this reservoir are then conveyed by pots, and poured into the beds of the Pans, (See Section III.) to the depth of 1½ inch, and left to evaporate in the sun for six days, when *Earth* Salt is produced. The salt is then scraped up and collected. The class of people called "Woopars" are the manufacturers of this article, and they chiefly follow this occupation. Some of them are cultivators and Tank diggers, and are of the poorest of the people. The period during which they carry on their salt operations generally, is six months in the year; viz., during the hot season, from January to June. Within this period, the article is manufactured five times a month, or thirty times in the whole season. During the remaining six months they engage themselves in other pursuits: men and cattle are both employed at the salt hills: in a few instances manual labor alone performs the work. The number employed at each salt-hill varies: one hill is worked by eight persons with four buffaloes; another by four persons with an equal number of cattle; a third by six persons and three buffaloes, and so on; some by one man and one buffaloe, while some are managed by manual labor only without the aid of cattle. The produce depends entirely on the labor bestowed.

Plan of Earth Salt Hillock and Pans.



F.

To

B. CUNLIFFE Esq.

Sub-Secretary to the Board of Revenue.

Sir,

By increasing exertions I have completed the Analysis of all the Earth Salts belonging to the first series of samples forwarded to me, and have herewith the honor to lay before the Board the results obtained. In accordance with the instructions contained in your letter of the 10th Instant, I have determined quantitatively only Sodium and Chlorine. Moisture and Insoluble matters had been already ascertained.

2. The qualitative Examination most clearly proves that there is nothing deleterious in any one of the samples examined. The quantity of Nitric Acid present, indicates, of course, a proportionate amount of Nitrates, but whether of Potash or Soda, or both, is too insignificant to act in any other way than as a slight stimulus to the Renal Organs.

MADRAS,
17*th June*, 1854.

I have &c.,
J. MAYER,
Chemical Examiner.

No. 23.

EARTH SALT.

Qualitative Examination shewed the presence of

Interstitial Moisture,	Sodium,
Insoluble matters, sand, &c.,	Potash,
Alumina,	Sulphuric Acid,
Iron,	Nitric Acid,
Lime,	Chlorine.
Magnesia,	

Quantitative Determinations gave the following values for in 100 parts,

Moisture, ...	6.85
Insoluble Residue, ...	4.53
Sodium and Chlorine, ...	82.78
	94.16
The Bases and Acids found by qualitative examination, if estimated by difference, indicate a gross per centage	= 5.84
	100.00

On this, a small allowance for loss in manipulation should be made.

Chloride of Sodium calculated on 100 parts of the dried Salt = 88.86.

No. 24.

EARTH SALT.

Qualitative Examination shewed the presence of

Interstitial moisture,	Sodium,
Insoluble matters, sand, &c.,	Potash,
Alumina,	Sulphuric Acid,
Iron,	Nitric Acid,
Lime,	Chlorine.
Magnesia,	

Quantitative Determinations gave the following values for in 100 parts,

Moisture, ...	7.02
Insoluble Residue, ...	4.82
Sodium and Chlorine, ...	80.70
	92.54
The Bases and Acids found by qualitative examination, if estimated by difference, indicate a gross per centage,	= 7.46
	100.00

On this, a small allowance for loss in manipulation should be made.

Chloride of Sodium calculated on 100 parts of the dried Salt = 86.79.

No. 25.

EARTH SALT.

Qualitative Examination shewed the presence of

Interstitial moisture,	Sodium,
Insoluble matters, sand, &c.,	Potash,
Alumina,	Sulphuric Acid,
Iron,	Nitric Acid,
Lime,	Chlorine.
Magnesia,	

Quantitative Determinations gave the following values for in 100 parts,

Moisture, ...	7.01
Insoluble Residue, ...	4.64
Sodium and Chlorine, ...	81.24
	92.89
The Bases and Acids found by qualitative examination, if estimated by difference, indicate a gross per centage,	= 7.11
	100.00

On this, a small allowance for loss in manipulation should be made.

Chloride of Sodium calculated on 100 parts of the dried Salt = 87.36.

No 26.

EARTH SALT.

Qualitative Examination shewed the presence of

Insterstitial moisture,	Sodium,
Insoluble matters, Sand, &c.,	Potash,
Alumina,	Sulphuric Acid,
Iron,	Nitric Acid,
Lime,	Chlorine.
Magnesia,	

Quantitative Determinations gave the following values for in 100 parts.

Moisture, ...	7·83
Insoluble Residue, ...	4·91
Sodium and Chlorine,...	78·99
	91·73
The Bases and Acids found by qualitative examination, if estimated by difference, indicate a gross per centage	= 8·27 (On this, a small allowance for loss in manipulation should be made.)
	100·00

Chloride of Sodium calculated in 100 parts of the *dried* Salt = 85·70.

No. 29.

EARTH SALT.

Qualitative Examination shewed the presence of

Insterstitial moisture,	Sodium,
Insoluble matters, Sand, &c.,	Potash,
Alumina,	Sulphuric Acid,
Iron,	Nitric Acid,
Lime,	Chlorine.
Magnesia,	

Quantitative Determinations gave the following values for in 100 parts.

Moisture, ...	7·20
Insoluble Residue, ...	5·20
Sodium and Chlorine, ...	80·60
	93·00
The Bases and Acids found by qualitative examination, if estimated by difference, indicate a gross per centage	= 7·00 (On this, a small allowance for loss in manipulation should be made.)
	100·00

Chloride of Sodium calculated on 100 parts of the *dried* Salt = 86·85.

No. 30.

EARTH SALT.

Qualitative Examination shewed the presence of

Insterstitial moisture,	Sodium,
Insoluble matters, Sand, &c.,	Potash,
Alumina,	Sulphuric Acid,
Iron,	Nitric Acid,
Lime,	Chlorine.
Magnesia,	

Quantitative Determinations gave the following values for in 100 parts.

Moisture, ...	6·80
Insoluble Residue, ...	5·20
Sodium and Chlorine, ...	81·24
	93·24
The Bases and Acids found by qualitative examination, if estimated by difference, indicate a gross per centage	= 6·76
	100·00

On this, a small allowance for loss in manipulation should be made.

Chloride of Sodium calculated on 100 parts of the *dried* Salt = 87·16.

No. 31.

EARTH SALT.

Qualitative Examination shewed the presence of

Insterstitial moisture,	Sodium,
Insoluble matters, Sand, &c.,	Potash,
Alumina,	Sulphuric Acid,
Iron,	Nitric Acid,
Lime,	Chlorine.
Magnesia,	

Quantitative Determinations gave the following values for in 100 parts.

Moisture, ...	7·20
Insoluble Residue, ...	5·06
Sodium and Chlorine, ...	80·15
	92·41
The Bases and Acids found by qualitative examination, if estimated by difference, indicate a gross per centage	= 7·59
	100·00

On this, a small allowance for loss in manipulation should be made.

Chloride of Sodium calculated on 100 parts of the *dried* Salt = 85·44.

No. 32.

EARTH SALT.

Qualitative Examination shewed the presence of

Insterstitial moisture,	Sodium,
Insoluble matters, Sand, &c.,	Potash,
Alumina,	Sulphuric Acid,
Iron,	Nitric Acid,
Lime,	Chlorine.
Magnesia,	

Quantitative Determinations gave the following values for in 100 parts.

Moisture, ...	7·42
Insoluble Residue, ...	5·42
Sodium and Chlorine, ...	79·30
	92·12
The Bases and Acids found by qualitative examination, if estimated by difference, indicate a gross per centage	= 7·88 (On this, a small allowance for loss in manipulation should be made.)
	100·00

Chloride of Sodium calculated on 100 parts of the *dried* Salt = 85·65.

No. 33.

EARTH SALT.

Qualitative Examination shewed the presence of

Insterstitial moisture,	Sodium,
Insoluble matters, Sand, &c.,	Potash,
Alumina,	Sulphuric Acid,
Iron,	Nitric Acid,
Lime,	Chlorine.
Magnesia,	

Quantitative Determinations gave the following values for in 100 parts.

Moisture, ...	7·50
Insoluble Residue, ...	5·63
Sodium and Chlorine, ...	78·92
	92·03
The Bases and Acids found by qualitative examination, if estimated by difference, indicate a gross per centage	= 7·97 (On this, a small allowance for loss in manipulation should be made.)
	100·00

Chloride of Sodium calculated on 100 parts of the *dried* Salt = 85·29.

No. 34.

EARTH SALT.

Qualitative Examination shewed the presence of

Insterstitial moisture,	Sodium,
Insoluble matters, Sand, &c ,	Potash,
Alumina,	Sulphuric Acid,
Iron,	Nitric Acid,
Lime,	Chlorine.
Magnesia,	

Quantitative Determinations gave the following values for in 100 parts.

Moisture, ...	7·38
Insoluble Residue, ...	8·79
Sodium and Chlorine, ...	76·94
	93·01
The Bases and Acids found by Qualitative examination, if estimated by difference, indicate a gross per centage	= 6·99 { On this, a small allowance for loss in manipulation should be made.
	100·00

Chloride of Sodium calculated on 100 parts of the *dried* Salt = 81·99.

To

B. CUNLIFFE, ESQ.

Sub-Secretary to the Board of Revenue.

SIR,

I have the honor to lay before the Board the results of Analysis of two crude specimens of Sulphate of Iron with Silicic Acid—these were numbered 27 and 28 in the list of Earth Salts, of which I sent in the Analytical Report on the 17th instant; but they have been purposely struck out of this list as they do not contain more than a trace of Chloride of Sodium, so small as not to be appreciable by the balance. These Iron Salts are not likely to be of the slightest use either in Medicine or the Arts, as crude Sulphate of Iron can be procured in almost every Bazar in India at a very small cost—whereas these Salts require to be freed from Silicic Acid to render them available.

MADRAS,
19*th June*, 1854.

I have, &c.,
J. MAYER,
Chemical Examiner.

ANALYSIS

OF TWO SPECIMENS OF CRUDE SULPHATE OF IRON.

The results given below have been obtained in the usual way after having first fused each specimen with about 4 bulks of the Alkaline Carbonates.

	No. 27.		No. 28.
Silica........................	29·60	......	31·60
Sulphate of Iron................	66·12	......	66·12
" of Lime..............	·767	......	1·02
Magnesia........................	trace	......	trace.
Chloride of Sodium.............	trace	......	trace.
	96.487		98·74 per cent.
Loss............................	3·513	......	1·26
	100·000		100·00

G

No. 284.

To

THE CHIEF SECRETARY TO GOVERNMENT.

SIR,

I am directed by the Board of Revenue to request that you will submit for the orders of the Honorable the Governor in Council the accompanying Extract from their Proceedings under date the 3d instant, on the subject of the supply of Salt for the Malabar District.

I have, &c.,
R. CLARKE,
Secretary.

FORT ST. GEORGE,
17*th May*, 1821.

Extract from the Proceedings of the Board of Revenue under date the 3d May 1821.

Read again the correspondence* with the Commissioner and the Collector in Malabar on the subject of the supply of Salt for that Province.

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* From Collector of Malabar 30th May in Con. 12th June 1820.
From Collector of Malabar 15th in Con. 26th June 1820.
From the Commr. 31st August in Con. 11th Sept. 1820.
From Collector of Malabar 31st Oct. in Con. 9th Nov. 1820.
From Collector of Malabar 18th December 1820 in Con. 4th January 1821.

2. In determining the mode of future supply, the Commissioner suggests the encouragement of the home manufacture to the extent of the consumption of the Province, and he proposes that deficiencies may be remedied by the usual importation of salt from Bombay; the Collector, however, does not admit the propriety of encouraging the home manufacture, but prefers importations of salt of foreign manufacture for the supply of the Province; this opinion is founded on the circumstance of the Natives pressing their demands for foreign salt, in preference to that of home manufacture, notwithstanding the excess of price; the unfitness of the soil generally for the production of salt of a good quality; the circumstance of the salt marshes of Calicut not containing sufficient brine to yield good salt; and the circumstance of the shortness of the season rendering Malabar greatly dependant for its supplies on importations of foreign salt. He however is desirous that a fair trial may be given to each mode of supply.

3. The Commissioner admits that advantage has been gained from the sale of foreign salt. He allows that the salt revenue has been improved by it, and that smuggling is checked, and as it is less liable to wastage from carriage, it is, under existing prices, eventually cheaper than that of country manufacture.

4. He, however, argues on the other side, that the suppression of the salt manufacture in Malabar leads to distress on the part of a numerous body of people whose subsistence depends on it, and that this distress could not possibly be remedied by compensation, as the owners alone would benefit and not the manufacturers; he also affirms that the home manufactured salt is generally preferred, and that the avidity with which foreign salt is purchased, as stated by the Collector, is to be attributed to that of country manufacture sold at the Depôts having been mixed with mud, and from its being deteriorated by long keeping in store; he is of opinion that the impurity of the salt of Malabar may be remedied, and he states, that the soil will yield salt of a much better quality than that brought to the storehouses for sale, as he has found good salt in many districts of the Province, and he affirms that the impurity of the Malabar salt is to be attributed in a great measure to abuse encouraged by the Monopoly.

5. It is also shewn that the result of purchase and sale in foreign and home manufactured salt is in favor of the latter. As the highest price paid by the Government for the latter is 27 Rupees per garce, the highest sale price 87 Rupees 8 Annas, making a difference of 224 Rupees 1 Anna 2 Pice per cent.; while the cost of foreign salt is 42 Rupees per garce, and it is sold at the rate of 112 Rupees, being a difference of Rs. 166-10-8 per cent. only.

6. Under the circumstances advanced in favor of the supply of the Province of Malabar with Salt from its own produce, as well as the apparent practicability of the measure, the Board resolve to recommend its adoption, and they are of opinion, that, with this view, the Collector should set all the pans which are available to work, and do every thing in his power to increase and improve the manufacture.

7. With regard to the conditions under which the Collector proposes that the manufacture of Salt in Malabar should be conducted, the Board observe—First, that the restrictions, with respect to the mode of cultivation, will be proper as far as they may be calculated to improve the quality of the salt and to prevent illicit manufacture; and where any limitation in the manufacture may be necessary, the working of those pans should be suspended, which have been found to yield salt of the worst quality. Secondly, the Board do not concur in the propriety of deferring the payment to the manufacturers until the salt has been sold by Government. The question on the propriety of the joint custody of the manufacturers and Sircar servants has already been discussed, and the practice ordered to be discontinued. The Collector, under the 13th Salt Rule, will therefore pay the manufacturers so soon as the salt has been delivered into store. Thirdly, when the quantity produced shall exceed the sales, the Collector proposes to reduce the manufacture of the following year proportionately. The Board concur in the propriety of this measure, and the Collector will, of course, on the same grounds, extend the manufacture of the country salt as the demand for it may increase.

8. It is apparent, that, although the encouragement of the manufacture of salt in Malabar be resolved on, some time must elapse before the produce will be sufficient to meet the consumption of the Province; and in the mean time it will be necessary that some certain source of supply be arranged to prevent the effects of a deficiency.

9. The Collector of Malabar states, that the most eligible mode of providing what is requisite, will be, to enter into an arrangement with the Bombay Government for the reservation of 1000 or 1500 garce of Salt, the produce of the Government pans in the island of Bombay, for the consumption of Malabar, and for exportation to Coimbatore, Mysore and Coorg, and he suggests the propriety of sending it in the Botillas which arrive at the Coast for timber, as the expense of freight would thereby be materially reduced, and, should this mode of conveyance not be available, he is of opinion that the requisite freight could be easily procured by advertisement, inviting tenders.

10. The Commissioner is of opinion that it would be more eligible to settle with the merchants of Bombay in the common course of trade. The Board, however, under the supposition that the payment of

the salt from Bombay might be adjusted by giving the Government of Bombay credit for the quantity of salt delivered at the average price throughout the year, or at an average price for any longer period, are disposed to prefer the arrangement proposed by the Collector, as the supply would, under it, be more certain, and unexceptionable in point of price.

11. The other sources of supply are Canara, Goa and Mocha, these however do not appear to be so certain as the proposed supply from Bombay,* and although the vast difference in price between the Goa and Mocha, and Bombay salts, might render it prudent to suspend the operation of the provisions of Regulation II. of 1818 for the importation of salt, the produce of the former places; yet the Board imagine that the reservation of salt at the Bombay pans would still be requisite to ensure a certain supply for Malabar. Should the Governor in Council be pleased to adopt the Board's suggestions as to the mode of supply adverted to, it remains to establish such rates for the sale of both foreign and home salt as best correspond with their relative qualities and the expense incurred in bringing them to market, for the Board conceive, that a price fixed on this principle would afford the best means of determining, as far as the wishes of the consumers are concerned, the eligibility of the one mode of supply, or the other.

12. This price would be best obtained by fixing the Monopoly, or sale-price, at the same rate of per centage, in either case, on the purchase price, or price at which either foreign or home manufactured salt could, respectively, be brought to market.

13. The Collector proposes that the price of Foreign salt be fixed at 112 Rupees per garce. He states that the average purchase price for five years is Rs. 38-15-5$\frac{7}{25}$†, in which case the Monopoly or sale-price is about Rs. 287 per cent. advance on the purchase price; the average price which has been paid by the Government for Salt, the produce of Malabar, is stated to be Rs. 19-10-7$\frac{21}{25}$, and if the monopoly price be also fixed at the same rate, viz. Rs. 287 per cent in advance, it will amount to Rs. 56-6-10.

	Rs. A. P.
* Average price of Bombay Salt for 5 years, ...	38–15– 5$\frac{7}{25}$
Price of Canara Salt, ...	35– 5–11
Do. of Goa Salt, ...	24– 2– 0
Malabar Salt, ...	19–10– 7$\frac{21}{25}$
Mocha, ...	36– 0– 0 39– 0– 0

† Statement B and the 5th para. of the Collector's letter of the 31st October in Con. 9th November 1820.

14. Mr. Græme proposed that the price of Malabar salt should be fixed at 50 per cent* less than that of the foreign salt;—consequently if the foreign salt be sold at 112 Rupees per garce, the price of the salt produced at Malabar would amount to Rs. 56 per garce, which is nearly equal to the price which the Board have deduced on the principle of fixing the monopoly price for both country and foreign salt at equal per centages on the price at which either could be brought to market. The monopoly price of Canara or Cundapoor salt would, on the above principle, be Rs. 101-8-2 per garce, as the purchase price amounts to Rs. 35-5-11.

15. In carrying into effect the manufacture of the salt at Malabar, the Commissioner is of opinion that Agreements should be procured from the proprietors, to deliver in a certain quantity of salt as the condition of being allowed to manufacture, and, that, if possible, the manufacture itself be rented; sufficient information has not been obtained to enable the Board to consider the propriety of renting the manufacture, they would therefore propose that a settlement be made individually with the owners of the pans; and with a view to improve the quality of salt manufactured, they are of opinion, that a higher price should be paid for that of a superior quality.

16. With a view of raising the salt manufacture to the greatest perfection attainable, the Board have given their attention to the modes of manufacture carried on throughout the Coast districts, and they have circulated, under date 15th of March, Extracts of letters from the Collectors, under whose superintendence, the manufacture is found to be most successful.

17. In reply, the Collector of Malabar has represented his intention of availing himself of the means which the Board have suggested†, as best suited to improve the salt of his district during the approaching season.

18. The Commissioner suggests farming the exclusive sale of salt in Malabar. This would free the Government from the trouble and abuse resulting from the management of the Salt Monopoly. They do not however consider that this measure is at present expedient, and would prefer first ascertaining the extent of the consumption of the Province under an extensive supply, limited only by the monopoly price.

19. It has been suggested by the Commissioner, that, in cases where suppression of the manufacture is necessary, buying up the privi-

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* Para. 4, Commissioner's letter 31st August in Con. 11th September 1820.

† From Mr. Vaughan, 5th in Con. [illegible]th April 1821.

lege of manufacture would be preferable to the grant of annual compensation. The Board admit that this arrangement would be advisable, provided the extent of the consumption of salt, the produce of the Province, were well ascertained; but as they have reason to suppose superiority in the quality of the salt of Malabar, would subsequently create a demand for it in preference to foreign salt, it will be impossible yet to calculate the extent of the demand, and consequently the extent of salt pans required; and the payment of a premium for the suppression of a manufacture which might hereafter be necessary, would subject the Government to unnecessary loss. They recommend therefore that the usual grants of compensation may be still continued.

20. The Board propose that the manufacture of salt in Malabar shall be gradually increased to such an extent as will meet the demands of the Province, but until the produce of the Province be equal to the demand, they would recommend, that a sufficient quantity be exported from Bombay to cover deficiencies, and that to ensure a constant supply, the Bombay Government be requested to reserve 100 or 150 Rash* of salt for exportation to Malabar, from the quantity produced at the Government Pans in the island of Bombay.

21. Resolved, that, should the Government think proper to authorize the adoption of the measures proposed, the Board will lose no time in issuing the necessary instructions to the Collector of Malabar.

(A true Extract.)

R. Clarke,
Secretary.

No. 618

Revenue Department.

To

The President and Members
of the Board of Revenue.

Gentlemen,

Para. 1. I am directed to acknowledge the receipt of your Secretary's letter of the 17th of May, with its Enclosures, relative to the future supply of Salt for Malabar, and to communicate to you the view taken by the Honorable the Governor in Council of the various points therein discussed.

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* Equal to 1000 or 1500 Garces.

2. The first point for determination is, whether the future supply shall be provided by means of salt manufactured in Malabar, or by means of salt imported from other quarters. Against the system of home supply it has been urged, that the Natives prefer foreign salt notwithstanding the higher price they pay for it; that the soil of Malabar is unfavorable for producing salt; that the season for manufacturing it is very short; that it is easier to prevent smuggling in the importation than in the manufacture of salt; and, that there is less wastage in the carriage of foreign, than of home salt. On the other hand, it has been stated, that the preference given to foreign salt arises from the impurity of home salt, which might be remedied by an improved manufacture, and that the suppression of the manufacture is the cause of much hardship to the manufacturers, which the compensation allowed to the owners does not alleviate.

3. The Governor in Council is of opinion that it would be an object of importance to supply Malabar entirely with home salt, if by an improved manufacture, the people should come to prefer it to foreign salt, and if the risk of smuggling could be adequately guarded against. The practicability however of fulfilling these conditions can only be ascertained by experiment. The proper way of making the experiment would be, to renew the manufacture of salt at those pans at which the best salt admits of being manufactured, and which afford the least facilities to smuggling. There, the measures, which the Governor in Council observes with satisfaction have been taken elsewhere under your directions, should be introduced for improving the quality of the salt. If they succeed, and if smuggling be checked, the experiment may be gradually extended. On the contrary, if they fail, the evil of turning the attention of a numerous body of labourers to the manufacture of salt from which it has for many years been diverted, and also the risk of a great increase of smuggling, will be avoided. It must be left to the Collector's discretion to determine at what, and at what number of pans, the manufacture should be renewed with the view above-stated, and the instructions to him should be, to give the scheme a full and fair trial, and to report its result.

4. It is stated in your Proceedings, that the result of the purchase and sale of foreign and home salt has been in favour of the latter, because its sale-price bears a higher per centage to its cost than that of the foreign salt. It appears, however to the Governor in Council that the result has been favorable according to the profit realized, and not according to the proportion betwixt the cost and sale-price. The per centage of the sale-price of the home salt upon its cost, is stated to have been 224 Rs., while that of the foreign salt was only 166 Rs.; but the profit realized on the former was only Rupees 60-0-8, while that on the latter was 70 Rupees.

5. Under your view of the foregoing point, you have recommended that the future sale-price of home and foreign salt should be fixed at the same per centage on their respective cost, in order to determine the eligibility of either mode of supply. By that rule the profit is required to be large in proportion as the article is dear, and small, in proportion as it is cheap; whereas, the reasonable rule seems to be, that an equal profit only should be realized; notwithstanding the high price of the article. By the rule last proposed, if the price of home salt were fixed at seventy Rupees, the same rate as in other districts, it would yield a profit of fifty Rupees, which, added to the cost of foreign salt, would fix its sale-price at about ninety Rupees. To fix the price of home salt at fifty-six Rupees, as proposed by you, and that of foreign salt, at a hundred and twelve Rupees, would, in reality, be, to grant a large premium for the consumption of home-salt in preference to foreign.

6. The price of Goa salt being only Rupees 24-2, while that of Bombay salt is Rs. 38-15, it is desirable that the supply required should be imported from the former place; and, with a view eventually to that mode of supply, you have suggested, that it might be prudent to suspend the operation of Regulation II. of 1818. On the occasion of a former reference, it was observed by the Governor in Council, that that Regulation was meant to protect the Salt Monopoly, and could not operate to interfere with it. The duty, which it imposes to prevent the importation of salt in the way of trade, would be nugatory if levied on salt imported for the Monopoly, as Government would both pay it and receive it.—Besides, as the Regulation defines *Foreign Salt* to be salt manufactured out of the Madras territories, if it had any operation in the case at all, it would apply equally to salt imported from Bombay, and from Goa, and Mocha.

7. The Bombay Government will be requested to attend to any communication which they may receive from the Collector of Malabar, respecting the provision and conveyance of Bombay Salt for the supply of that Province; and that Officer is authorized to make the best arrangements, in that respect, which may be in his power.

8. The Governor in Council concurs in your remarks with respect to the several proposals for farming the manufacture and the exclusive sale of salt, and for buying up the privilege of manufacture, rather than granting an annual compensation for it in those cases in which it is not allowed to be exercised.

I have, &c.,
D. Hill,
Secretary to Government.

Fort St. George,
24th August, 1821.

To

THE PRESIDENT AND MEMBERS
OF THE BOARD OF REVENUE,
Fort St. George.

GENTLEMEN,

Para. 1st. In my letter of the 13th January last, I reported to your Board the result of a sale, by auction, of 34 garce of Country Salt, at a period when there was no other of the description in the Depôts, and which sale I kept open for some days in consequence of only 37 Rupees having been bid, although subsequently it rose to 50 Rupees per garce.

2d. Having a small quantity of illicit salt which had been seized, I tried the experiment some months afterwards in a different part of the Province, when again no more than 50 Rs. were offered, but had there been a large stock in hand, it is obvious, that a much smaller sum would have been bid.

3d. With reference therefore to the instructions conveyed to me under date the 29th March last, and to the time for the manufacture approaching, I wish to be honoured with your Board's pleasure as to the propriety of allowing any to be manufactured this year, and to what extent.

4th. This subject has been so often and so fully discussed, that I hold it superfluous to add any thing more to it, except to record it as my firm opinion, that as long as foreign salt is sold *ad libitum* to those who prefer it, not one grain of country salt will be disposed of, whilst the former is sold at 70 Rs., and the latter at a lower rate, proportioned only by the difference of the purchase price of each respectively, more especially as when foreign salt was sold at 112 Rs. and country at Rs. 70, little or none of the latter was voluntarily purchased.

PRINCIPAL COLLECTOR'S OFFICE,
CALICUT,
August 23d, 1824.

I have, &c.,
J. VAUGHAN,
Principal Collector.

To

THE PRINCIPAL COLLECTOR
OF MALABAR.

SIR,

Para. 1. I am directed by the Board of Revenue to acknowledge the receipt of your letter of the 23d ultimo,* representing the preference still shewn by the people to Foreign Salt, and requesting orders as to

* In Con. 30th August, 1824.

whether you are to carry on the manufacture of Country Salt during the current fusly.

2. You will observe, on reference to the correspondence which has passed on this subject, that the expediency of persevering in the manufacture of country salt in Malabar, was considered by both the Board and the Government, to depend mainly on the possibility of improving the quality of that article, to such an extent, as to place it more nearly on a par with that imported from other places. On this point you offer no information. Before replying to your letter therefore, the Board are desirous of learning how far your endeavours to this end have succeeded, and whether you consider the object in question to be ultimately attainable.

3. You must be aware how desirable it is that the manufacture of country salt should still be carried on, as giving employment to a number of individuals, who would, otherwise, for a certain period at least, be cut off from the means of gaining a subsistence, and in this point of view you will see the necessity, even if it should eventually be found necessary to discontinue the manufacture, that it should be done very gradually.

I have, &c.,
J. Dent,
Secretary.

Fort St. George,
23d September, 1824.

To

The President and Members
of the Board of Revenue,
Fort St. George.

Gentlemen,

Para. 1. I have the honor to acknowledge the receipt of your Board's letter of the 23d instant, relative to the manufacture of Salt in this Province, which, in the opinion of Government and the Board, should depend mainly on the possibility of improving the quality of that article, but in the event of this not proving feasible, that it should eventually, if found necessary to discontinue it, be done away gradually.

2. In explanation of the first, I have no hesitation in stating, that from the want of a sufficiency of brine, and from various other circumstances connected with the manufacture of this article, the Pans and climate of this Province do not contain the requisites essential for making salt of a description so much better than has hitherto been

made, as to bear a competition with foreign salt, although the former be sold for less than half the price of the latter, provided the purchasers are allowed the option.

3. With respect to the gradual discontinuance of it, it has so chanced, that from the increased difficulty of disposing of what has been manufactured from year to year for some time past, the quantity manufactured, has been decreased in the same ratio, so as almost to have died a kind of natural death—and the applications for permission to manufacture, have latterly declined in the same proportion, those which have been made, appearing to be merely for the sake of keeping the subject alive.

Salt Gollah,
Oormaneoor,
September 29th, 1824.

I have, &c.,
J. Vaughan,
Principal Collector.

Revenue Department.

To

The Principal Collector
of Malabar.

Sir,

Para. 1. I am directed by the Board of Revenue to acknowledge the receipt of your letter of the 29th último.*

2. Under the circumstances stated by you, the Board leave it to your discretion to determine, whether any and what quantity of salt shall be manufactured during the present year. You are aware of the feelings of the Government in regard to the persons who have heretofore derived a subsistence by the manufacture, and the Board feel assured that they will have due weight in the determination you may eventually form on the subject.

I have, &c.,
J. Dent,
Secretary.

Fort St. George,
11*th October*, 1824.

No. 110.

To

T. Pycroft, Esq.
Secretary to the Board of Revenue,
Fort St. George.

Sir,

Para. 1. I have the honor to acknowledge the receipt of the

* In Con. 11th October, 1824.

Extract from the Proceedings of the Board, dated 18th ultimo, in which I am desired to submit a report on the practicability of supplying Malabar with Salt, in future, either from the neighbouring Province of Canara, or from some other District, as suggested by Government.

2. A reference to the correspondence which is to be found in my Office from 1819 to 1826, shews, that the subject of the supply of Salt for the District of Malabar, (which it has been amply proved cannot supply itself,) has, as remarked by Government, frequently been on the tapis. The question seems always to have been treated on the points of cheapness, goodness and certainty of supply. The Eastern Coast Ports, Goa, Canara, and Bombay were indiscriminately applied to, and the preference which was finally given to the last, arose from the simple reason, that she could give a better, more certain, and cheaper article than any of her rivals. And the same reason I would beg to remark still holds good. An examination of the rates at which Salt has been procured for the last 10 years, shews, that however high incidental circumstances may have raised the price at times, it has been obtained, on an average, at 25 Rupees per garce of 120 Indian maunds. Now Mr. Blair* in answer to a late inquiry, informs me, that he cannot assure me salt from Canara at a less price than 27 Rupees, and this, with landing and measuring charges which are always defrayed by the Bombay merchant, would raise the garce to 30 Rupees, and that for an article very inferior to what we get from Bombay for 25 Rs. So inferior indeed is the Canara, and I may add the Goa Salt, to that of Bombay, that it is extremely difficult to get rid of the one when the other is in store. This I experienced last year, when, in consequence of an expected failure in my supply from Bombay, as detailed in my letter to the Board of the 7th November last, I had recourse to both Goa and Canara for aid. The Bombay pans produce a much stronger description of salt than those of the countries to its southward, where the climate is, I imagine, too moist for the manufacture, and all the traders much prefer it as being less liable to injury and waste in carriage. The salt made on the Eastern Coast is equally good with that of Bombay, but its price is far higher. I applied last year to the Collector of Tinnevelly to know if he could send me a supply, and was informed that he could not do so under 36 Rupees per garce—with landing charges, &c., this would be 39 Rupees.

3. Under all these circumstances, I beg to recommend, that no alteration take place in the present arrangement—which, in addition to

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* Mr. Blair adds that he can only give me a small quantity for the present season, inasmuch as his manufacture has fallen short from natural causes.—These I apprehend can never be fully guarded against in a country like Canara, and there is no warrant therefore for a certainty of supply from that quarter.

furnishing a good article at a reasonable price, has the additional advantage of assisting, by its transport, the gainful general trade which Malabar carries on with Bombay. The Boats which come down to carry away our superfluous produce would suffer from losing a freight which serves at the same time as ballast.

I have, &c.,
H. V. CONOLLY,
Collector.

CALICUT,
9th October, 1845.

H.

Extract from a letter from the Collector of Canara, dated 6th June, 1851.

* * * * * *

2. With reference to Para. 2, of the Board's letter, I beg to state, that up to the year 1838, whenever it was necessary to purchase salt to aid the supply of this district, it was usual to obtain the additional supply from Goa. In the year above mentioned, the supply from Goa failed, and the Contractor was allowed to bring 120 garce from Bombay. This was readily purchased by the dealers, and is now so much preferred by the dealers in the south of the district, to Canara salt, for transport inland, that the demand has increased, and the extended trade with the interior has been supplied in great part from Bombay,* instead of by an increase of our manufacture to the full extent of the increased consumption.

3. There would be difficulty in increasing the home manufacture to the full extent of the increase in the trade, but the Bombay salt is so much preferred, that, if it were not supplied to the trade at Buntwal, the change would merely drive the traders to Malabar, where no other salt is sold. If therefore the present monopoly system is to be continued, I think it desirable that the Buntwal depôt should still be supplied with that salt which the people prefer.

* * * * * *

F. N. MALTBY,
Collector.

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* To the extent of 1,200 garce last year.

I.

Statement exhibiting the quantity of Salt manufactured and sold at the several Cotaurs in the Maritime Districts of the Presidency of Madras for Fusly 1262.

District.	No.	Names of Cotaurs.	Quantity Manufactured.	Quantity Sold.
			I. Maunds.	*I. Maunds.*
Ganjam.	1	Ganjam,	1,36,222	65,919
	2	Munsoorcotah,	16,539	5,426
	3	Nowpadah,	2,34,876	2,63,221
	4	Wommervelly,	1,35,319	41,997
		Total...	5,22,955	3,76,561
Vizagapatam.	1	Currasah,	1,11,721	41,963
	2	Nellimookoo,	1,28,214	58,595
	3	Conada,	12,059	30,802
	4	Cooppilly,	1,00,733	45,926
		Total...	3,52.727	1,77.285
Rajahmundry.	1	Goorzanapully,	29,757	28,338
	2	Salapauka,	22,295	52,641
	3	Chollungy,	11,810	11,104
	4	Pennoogoodooroo,	79,815	68,424
	5	Vaymoolavauda,	823	15,973
	6	Curpa,	1	3,699
	7	Pauturlagudda,	1,801	1,756
	8	Pasala Deevy,	32,699	47,154
	9	Auramokaum,	26,043	25,548
	10	Uvvul,	13,690	13,296
		Total...	2.18.733	2,67,932
Masulipatam.	1	Pondraca,	5,37,347	1,04,742
	2	Innoogoodooroo,	96,641	37,539
	3	Quantity of Salt purchased,	690	690
		Total...	6,34.677	1,42.971
Guntoor.	1	Chinna Ganjam,	2,48,400	4,25,256
	2	Pedda Ganjam,	1,64,400	1,50,652
	3	Nizampatam,	63,600	7,741
	4	Parlie,	22,800	18,439
		Total...	5,03,652	6,01,035
Chingleput.	1	Soonnaumbutt,	31,209	36,791
	2	Cheyoore,	1,05.209	81,897
	3	Pyennoore, &c.,	52,518	26,327
	4	Covelong,	65,546	71,654
	5	Vadasummunjay,	29,199	77,720
	6	Vulloore, &c.,	78,104	78,104
	7	Soonnapoogoontah,	14,247	14,463
	8	Poongolum,	23,160	31,437
		Total...	3,99,191	4,18,391
		Carried forward...	26,31,935	19,84,178

District.	No.	Names of Cotaurs.	Quantity Manufactured.	Quantity Sold.
			I. Maunds.	*I. Maunds.*
		Brought forward,...	26,31,935	19,84,178
Madura.	1	Taracoody,	12,006	23,508
	2	Mookyoor,	25,305	53,484
	3	Moodoo Ragoonadapatam,	25,200	26,277
	4	Vaulenokum,	27,651	16,623
	5	Morekolum,	12,042	15,252
	6	Autungerray,	18,000	20,667
	7	Vyravauthapatam,	21,605	26,900
	8	Ooppoor,	20,424	27,995
	9	Ogundaucoody,	38,408	30,659
	10	Manacoody	58,808	55,580
	11	Sholeacoody,	33,651	28,055
	12	Vuttanum,	21,615	31,284
	13	Coleyanagerry,	9,668	13,127
	14	Theethundadanum,	13,206	19,895
		Total...	3,37,587	3,89,303
Nellore.	1	Canoopurty,	64,800	20,817
	2	Davarumpaudoo,	40,800	9,903
	3	Pauderty,	63,600	54,225
	4	Alloor,	49,200	32,480
	5	Paukala Cottaur,	48,000	38,606
	6	Bungenepully,	24,000	35,856
	7	Toommalapenta,	9,600	9,638
	8	Joovuldinna,	6,000	6,971
	9	Eskapully,	26,400	48,113
	10	Gowgoolapully,	38,400	71,513
	11	Varinee,	19,200	17,345
	12	Gungapatam,	7,262	17,713
	13	Kristnapatam,	32,400	48,337
	14	Cottapatam,	2,400	3,426
	15	Toopily,	6,000	8,112
	16	Doogarauzepatam,	9,600	8,174
	17	Mullain Cotaur,	15,600	17,520
	18	Valoocaudoo,	10,810	8,352
	19	Toda,	38,400	65,531
	20	Poody,	9,600	9,435
	21	Ramapoorum,	3,600	5,938
		Total...	5,25,672	5,38,004
South Arcot, (*continued on next page*). Murkanum.	1	Merkanum,	1,72,930	1,48,292
	2	Cundauda,	13,414	12,926
	3	Nadoocooppum,	247	239
	4	Tincanoore,	31	29
	5	Woorany,	3,485	3,393
	6	Anoomunday,	781	753
	7	Teyagavully,	23,268	25,222
	8	Killay,	6,809	7,825
	9	Naccaravundungoody,	7,554	10,384
	10	Thellavadungoody,	3,886	3,329
		Quantity of Salt supplied to the French Government at Pondicherry,	0	5,052
		Total...	2,32,404	2,17,444
		Deduct, wastage occasioned on Salt supplied to the French Government at Pondicherry,	0	4,081
		Remainder...	2,32,404	2,13,363
		Carried forward...	37,27,598	31,24,848

District.		No.	Names of Cotaurs.	Quantity Manufactured.	Quantity Sold.
				I. Maunds.	*I. Maunds.*
South Arcot, (*continued.*)	Cuddalore.		Brought forward...	37,27,598	31,24,848
		1	Goondalum,	16,768	13,666
		2	Patchiancopong,	2,156	3,390
		3	Cudecaudoo,	2,471	5,327
			Total...	21,394	22,383
			Quantity of Salt supplied to the French Government at Pondicherry,	0	2,325
			Total...	21,394	24,708
			Deduct wastage occasioned on Salt supplied to the French Government at Pondicherry,	0	248
			Remainder...	21,394	24,460
			Total of the two Divisions...	2,53,798	2,34,775
			Quantity of Salt supplied to the French Government at Pondicherry,	0	7,377
			Total...	2,53,798	2,42,152
			Deduct wastage occasioned on Salt supplied to the French Government at Pondicherry,	0	4,329
			Remainder...	2,53,798	2,37,823
			Quantity of Salt imported from the Cotaur Nadoovausil, in the District of Tanjore,	6,000	1,799
			Total...	2,59,798	2,39,622
Tanjore.		1	Arsanagherry,	36,994	43 430
		2	Auyepatam,	19,188	19,711
		3	Sendalay,	8,739	9,794
		4	Corookin,	5,094	5,103
		5	Sembay,	7,195	7,187
		6	Culmavady,	27,383	27,623
		7	Sembagamaghadany,	7,832	7,869
		8	Adrampatah	39,088	51,720
		9	Taumerencottah,	31,245	32,439
		10	Tumbekenullevencotah,	37,202	57,572
		11	Magalencottah,	28,297	24,270
		12	Tempaudy,	11,288	15,914
		13	Vadapaudy,	29,900	25,082
		14	Keeliwoor,	4.625	5 825
		15	Kadacaud, Parootottum, and Soligaamum,	11,663	20,044
		16	Tunnaumpatam,	9,839	14,639
		17	Keelicurray,	8,175	6,000
		18	Valadalagoody	4,718	2,258
		19	Poottoor, Ackarapottoor, Andanumpett, and Paupa Covil,	88,240	85,494
		20	Covilput,	5,569	4,065
		21	Vadaranniem,	44,172	23,585
		22	Chendrapaudoo,	6,719	10,190
			Total...	4,73,163	4,99,810
			Carried forward...	42,28,155	36,50,917

District.	No.	Names of Cotaurs.	Quantity Manufactured.	Quantity Sold.
			I. Maunds.	*I. Maunds.*
		Brought forward...	42,28,155	36,50,917
Tinnevelly.	1	Vypaur,	55,766	49,851
	2	Munjuncolum,	50,128	42,985
	3	Arasady,	39,887	35,233
	4	Tutacorin,	52.319	74,580
	5	Palia Coil,	29,964	34,901
	6	Coilpatam,	23.391	69 585
	7	Coolasagrapatam,	19.868	27.309
	8	Viziapathy, &c.,	9 536	21,972
		Total...	2.80.859	3,56.415
Canara.		*Candapore.*		
	1	Hanegally,	29,112	0
	2	Vaderhobly,	28.158	0
	3	Harnaud,	36.252	0
	4	Byndoor,	19,246	0
		Total...	1,12,768	0
		Honore.		
	5	Coomta,	49.027	0
	6	Shirvully Bulkul,	70,502	0
	7	Byloor,	11,441	0
		Total...	1,30,971	0
		Ankola.		
	8	Naggurbyle,	1,87.714	0
			4 31,454	0
		Salt purchased,	1,20,723	0
		Total...	5.52,177	4,60.278
Malabar.	1	Cannanore,	51,077	49,965
	2	Tellicherry,	51,152	52,400
	3	Calicut,	83,514	48,324
	4	Ponany,	1,14,625	60,724
	5	Chowghaut,	1,788	3 622
	6	Cochin,	0	1.654
	7	Ariacode,	0	9.838
	8	Ottapollem,	386	49,215
	9	Palghaut,	0	7,736
	10	Allatoor,	0	10,572
		Sales of smuggled Salt,	0	68
		Total...	3.02,544	3,33,119
Madras.		Attiput,	2.15,775	0
		Ennore,	1,00,415	0
		Cuttivauk,	10,452	0
		Total...	3,26,642	
		The sales at the Town of Madras include the Salt made at the above pans and also Salt received from Chingleput, 1,11,027; Do. Nellore, 7,800	0	4,63,554
		Sales of incomplete heaps, and of portions of full heaps,	0	22,496
		Grand Total...	56.90,377	52.86.779

P. S.—The Pans of Vulloor and Voyaloor have been lately transferred from Chingleput to Madras. Some new Pans have been opened at Poortiwakum (Madras,) and those of Cuttiwauk discontinued. It is supposed that the Madras Pans will now yield upwards of 9,000 Garce, or 10,80,000 Maunds per Annum.

W. H. BAYLEY,
Secretary.

J.

No. 86.

Extract from the Proceedings of the Board of Revenue, dated 8th March, 1852.

Read Extract Minutes of Consultation dated 16th January, 1852.*

(Here Enter No. 56.)

Para. 1. The Government, in the above Extract Minutes of Consultation, desire the Board of Revenue to "report upon the subjects referred to in paras. 1 and 2," of a letter from the Secretary to Government at Bombay, to the Madras Government, dated 8th December, 1851.

2. The two paras.: of this letter refer to a printed correspondence with Lieut. DeLisle of the Engineers, relative (I.) to the introduction of some mode of weighing or measuring Salt, and (II.) of introducing an uniform mode of computing the equivalent of the Indian Maund. The Bombay Government being in favour of superseding *weighing* by the introduction of uniform *measures* of the description proposed by Lieut. DeLisle.

3. There is also a reference made in Mr. Secretary Goldsmid's letter, to the allowance for *wastage*, but which having been noticed in the Board's letter to the Chief Secretary, 5th February 1852, the subject does not require further notice in these Proceedings.

4. As to the general question weighing or measuring Salt, the Board have always advocated the latter process, and will take this occasion to notice in brief all the correspondence that has taken place on the subject.

5. When Act VI., of 1844, became law, and the price of Salt in this Presidency was fixed,† at so much per *Indian Maund*, the Board of Revenue assumed that a Garce‡ of Salt was equivalent to 120 Indian Maunds, this having been the usual rate of conversion for years previous.

6. The Government of Madras having called on the Board§ for

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* In Con. 8th March, 1852.

† Sec. XLIII. The price fixed was 1¼ Rs. per Indian Maund: but since reduced to 1 Rupee.

‡ 400 Mercals of 828⅓ cubic inches, or 3,31,333⅓ cubic inches.

§ From Government 1st August, in Con. 12th September, 1844.

some explanation on this point, they observed,* that previous to the year 1828, it was always usual to *measure* Salt, and that the assumed rate was 120 Bengal Maunds to 1 Garce, but how this rate came to be first established, has never been ascertained. In 1828† *weighing* was introduced, and the Collectors were ordered to consider 9,256½ lbs. Avoirdupois = 1 Garce.‡

7. It having however been pointed out by the Bengal Government, that the Madras Authorities referred to the Bazar Maund of 82$\frac{2}{7}$ lbs. Avoirdupois (now called the Indian Maund,) whereas the *Salt* Maund was 84 lbs. 3 oz., the rate of conversion was changed into 84 lbs. 3 oz., × 120 = 10,102½ lbs. per garce, but subsequently, the *Salt* Maund being abolished, the rate reverted to 120 Indian Maunds, or 82$\frac{2}{7}$ × 120 = 9,874$\frac{2}{7}$ lbs. per garce.

8. The Board further observed, that from experiments tried§ at Madras, Chingleput, Nellore, Rajahmundry and Vizagapatam, a garce of *new* Salt weighed from 10,006½ lbs. at Madras, to 7,554 at Vizagapatam, but that the average of all was 9,291 lbs. Of *old* Salt the garce varied from 11,066 to 8,980 lbs. per garce, but on an average 9,944 lbs.—or, average *new* 9,291 lbs. average *old* 9,944 lbs. Under these conflicting circumstances, the Board considered it better to keep to the 120 Maunds (= 9,874$\frac{2}{7}$ lbs.) as the equivalent of a garce.

9. A reference was in the mean time made by the Madras Government‖ to Bombay on the subject, and on the 30th September 1845 that Government forwarded two letters, one from the Revenue Commissioner and one from the Collector of Customs. The former stated that the practice of *measuring* was used for Export by Sea, and *weighing* for Inland sales, and he recommended no alteration. The latter Officer was in favour of measuring altogether, as saving time.

10. The Government of India had also been referred to, to ascertain, whether "a measure of capacity" might not be substituted in the Maritime Provinces of Madras, calculated to hold 1 Indian Maund

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* Proceedings Board of Revenue, 19th September, 1844.

† From Government 17th, in Con. 23d June, 1828.

‡ This weight was no doubt assumed quite arbitrarily in consequence of its being stated in every Almanac since 1800, that 9,256½ lbs. = 1 Garce. No Almanac however mentions what grain or other material the weight of 9,256½ lbs. refers to, but it is supposed to be Rice, which certainly weighs less than Salt, and moreover the Garce was then (*i. e.* in 1800) 400 Mercals of 750 cubic inches each, not 828⅓, as in the *Salt* Mercal subsequently adopted.

§ There is no record of the details of these experiments.

‖ Vide from Government 21st February in Con. 14th May 1846.

of Dry Salt, reserving to the Merchants the right of adjusting their purchases by actual weight, if they desired it.

11. Under date the 24th January 1846* the Government of India transmitted Reports from several of their Salt Officers, all urging sales by *weight*, and these were forwarded to the Board of Revenue. Some of these Reports contain references to experiments made; but different kinds of Maunds seem to have been used, and the processes were not so distinctly explained, as to be a guide in coming to any definite conclusion. The Board of Revenue therefore again† reported to Government that they still adhered to their former opinion in favour of *measuring*. They considered this to be by far the most expeditious mode, and therefore advantageous both in the processes of selling and of examining store, whilst the facilities for fraud were no greater than in weighing. Atmospheric changes might sometimes cause the same measure to weigh differently, but the difference, they considered, would be too slight to affect the general results, and they recommended that "a measure of capacity to hold 1 Indian Maund" should be used, in supercession of the Mercal, 3⅓d of which‡ were assumed to be equivalent to 1 Indian Maund. In consequence of this, the Government of India§ authorized "the substitution of a measure of capacity to be used in the Maritime Provinces of the Madras Presidency in conducting the sales of Salt, instead of the Indian Maund of 3,200 Tolas weight."

12. The Board of Revenue being instructed to prepare Measures, accordingly placed themselves in communications with the Acting Mint Master, Captain Buckle.

13. The three letters from Captain Buckle to the Board of Revenue,‖ shew clearly the processes by which he arrived at the construction of a Measure, which should contain a certain multiple of a Maund of loose Salt.

14. It was necessary for him to make a series of experiments to ascertain what was the Specific Gravity of loose Salt; for he had at

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* From Government 21st February in Con. 14th May 1846.

† 14th May 1846.

‡ 400 Mercals = 1 Garce = 120 Maunds.
3⅓d Mercals = 1 Maund.
10 Mercals = 3 Maunds.

§ 4th July 1846.

‖ 23d October 1846 in Con. 7th January 1847.
5th December 1846 in Con. 7th January 1847.
24th in Dy. Con. 26th April 1847.

first *calculated* the size of his measures from a Specific Gravity of 2·125* (water being 1·0) which he soon found applied to Solid or Rock Salt, whereas Loose Salt varied about 0·8.

15. In his first letter he considered "50 lbs. too heavy for native use," and therefore in his subsequent correspondence never proposed a measure to hold a full Maund, as Lieut. DeLisle does, but made patterns of vessels to hold respectively, (as tried by actual weighing,) ½, ⅓ and ¼ Maunds of "loose dry salt." The Board preferred the ¼ Maund as most resembling the Mercal so long in use, but desired one of 8 inches diameter instead of 10, as proposed by Captain Buckle. This was because the common Mercal was about that diameter, and because the narrower the diameter, the less difference would be made by fraudulently *heaping* the measure.

16. The Board† sent wide and narrow ½ Maund Measures, and wide and narrow ¼ Maund Measures to the Collectors of Madras, Chingleput, and Nellore, directing them to make trials with them, and report their opinion. The dates of their Replies are noted below,‡ they contain some account of the experiments made, and shew that the Collectors prefer the narrow ¼ Maund Measure.

17. The Board also caused a series of experiments to be made in their own Office with the long ¼ Maund Measure, and submitted the results, with those of the three Collectors, to Government, on the 20th January 1848.

18. They observed that all the experiments shewed great fluctuations, that Salt purposely dried, would give the purchaser about 5¼ per cent. less than he ought to receive, (though it could seldom be so dry in the Cotaurs,) and that Salt, if even slightly shaken, gives about 1½ per cent. more to the purchaser than he would have, if it were only *lightly poured* in the manner presumed, when the pattern measures were made.

19. On the whole, they were disposed to continue the old *Mercal*,

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* As given in works on Chemistry.

† 13th May 1847.

‡ From Madras 6th in Con. 23d August 1847.
From Chingleput 8th September in Con. 11th October 1847.
From Nellore 2d in Con. 11th October 1847.

which was estimated to contain 12 seers of 80 Tolas each, or 960 Tolas* weight of Salt, being $\frac{3}{10}$ths of a Maund; so that a purchaser of 10 Mercals would receive what would be equivalent to 3 Maunds: or 40 Mercals = 12 Maunds, the minimum quantity then allowed to be sold in the Salt manufacturing districts.†

20. The measuring of Salt by the *Mercal*, was accordingly authorized by Government, on the 7th February, 1848.‡

21. On the Board's requisition that Mercals might be made up at the Arsenal, a discussion arose with the Military Board,§ who objected to the pattern sent by the Board of Revenue, as being considerably *larger than the standard* Mercal authorized by Government in the Proclamation dated 16th October 1846, and published in the Gazette of the 20th.

22. The Board explained, that the *Salt* Mercal was prepared by Major DeHavilland,‖ then Inspector General of Civil Estimates, and distributed to the several Salt Districts in 1820,¶ and that they had ever since been in use for measuring Salt. The Salt, or DeHavilland Mercal, being a cylinder of 8 inches diameter, by 16·4791 in depth, or a capacity of 828$\frac{1}{3}$d cubic inches—the Regulation Mercal of 1846, being 800 cubic inches; so that the *Salt* Mercal is 3$\frac{1}{2}$ per cent. in excess of the Regulation.

23. The Board** brought this discussion to the notice of Government, and pointed out, that since the passing of Act VI. of 1844, the Garce of 400 *DeHavilland* Mercals has been considered equal to 120 Indian Maunds, and sold for 120 Rs.; and that if the capacity of the

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* The $\frac{1}{4}$ Maund is 800 Tolas or 20·57lbs. avoirdupois.

† By the Salt Rules of 23d December 1850, the minimum is fixed at 5 Mercals or 1$\frac{1}{2}$ Maunds, except where the Board may specially authorize a smaller amount.

‡ In Con. 21st February, 1848.

§ From Secretary Military Board 4th in Dy. Cons. 19th July, 1849.
To Secretary Military Board 17th in Dy. Cons. 19th July, 1849.

‖ The Board's Records shew that Major DeHavilland did not propose this as a Salt Mercal only, but as a standard Mercal, in supercession of the one approved of by Government in 1802, of 750 cubic inches, but which was so little attended to, that in 1819, the Mercals of the Public Offices were found to average 828$\frac{1}{3}$d cubic inches.
From Inspector Genl. to Board 3d December, 1819.

¶ From Major DeHavilland 24th in Con. 26th June, 1820.

** 20th December, 1849.

Mercal be reduced, it would be necessary to make a corresponding alteration in the price per Garce.

24. The Government on the 8th January, 1850,* authorized the use of the DeHavilland Mercal of 828⅓ cubic inches for sales of Salt, so that now, that article is sold in the Madras Maritime Districts, at a computation of 3,31,333½ cubic inches to 120 Indian Maunds, or, 2761·1† cubic inches to 1 Maund.

25. With reference to the first point now proposed for the consideration of the Board, viz., the relative advantages of weighing and measuring, they are of the same opinion with their predecessors, as to the preference to be given, generally, to measuring, in lieu of weighing. The plans of weighing, adverted to by Lieut. DeLisle, are ingenious; but Machines of this kind are easily put out of order when exposed to the action of salt, sea-air, and the manipulation of natives, and the Board consider there would be as little error, and an equal amount of expedition, if the Salt were measured.‡ These observations refer to weighing Salt in *general* with the instruments now available, but as regards the Port of Bombay, where the transactions are on a peculiarly extensive scale, and under the immediate superintendence of European Officers, the case may be different, though much must depend on the expense and simplicity of the weighing apparatus employed, a point, it would appear, by no means yet settled. The Board feel that it is hardly within their province to decide on the merits of weighing Machines: they coincide with Lieut. DeLisle's views on "weigh-bridges" (paras. 23 and 24 of his letter of 16th July 1851,) but are disposed to think, that platform Balance, working with a steel-yard, would be free from many of the objections that exist against weigh-bridges and against the scale-beams of para. 18. The advantage of the steel-yard would be, that it could be adjusted at any time by trial with a standard weight of 82$\frac{2}{7}$ lbs. kept in deposit at the Depôt.

26. The Board will now proceed to notice the other point required of them; viz., an uniform mode of computing the equivalent of the Indian maund, observing, in the first place, that they have adopted a

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* In Con. 10th January 1850.

† Lieut. DeLisle assumes 2924·1 as being the equivalent to a Maund.

‡ In para. 18 of Lieut. DeLisle's letter, he calculates that the weighing Machine will dispose of 240 Maunds an hour. This is 2 Garce an hour, which is not quicker than the Madras measuring.

rate of conversion different from that of Bombay as assumed by Lieut. DeLisle, which is 2924·1 cubic inches to 82$\frac{2}{7}$ lbs.,* theirs being (as stated in para. 24 of these proceedings) 2761·1 cubic inches to 82$\frac{2}{7}$ lbs. The former gives a Specific Gravity† of ·7803, the latter ·8264, or a difference of about 6 per cent., so that a cargo, which, in Bombay, was measured and entered as 100 Maunds, would, if re-measured by the Mercal, and at the Madras rate, (supposing no wastage,) produce an out-turn of 106 Maunds. So much so, that the Board would have been prepared to expect, that the Collector of Malabar would have to account for a surplus of 6 per cent., if he sold by the Mercal. He has however been authorized in March‡ last, to sell by a measure equivalent to an Indian Maund.

27. It may be in place here to mention, that the Collector was desired by the Board to weigh the contents of the Maund Measure, and on receiving one from Bombay made after Lieut. DeLisle's pattern, (2924·1 cubic inches) he reports to the Board, (4th February 1852,)§ that, by *his* trials, it was found to contain 98$\frac{3}{4}$ lbs. or an excess of 20 per cent.

28. This shews that no uniform equivalent of measure for weight can be depended upon, unless there is an uniform method of measuring.

29. Leaving this particular result however out of consideration, the Board return to the circumstance of their rate being fixed at a specific gravity of ·8264, whilst that of Bombay is ·7803.

30. This may arise, first, from the Salt being of a different quality, or secondly, from one mode of measurement involving more shaking than the other—of the former they have no means of judging, but to the latter the Board chiefly attribute much of the difference in the various estimates which they have had occasion to refer to.||

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* Para. 16 of his letter 16th of July, 1851.

† S = Specific Gravity is thus computed,
Let a = cubic inches given,
b = lbs. given,
c = cubic inches in 1 lb. of water *i. e.* 27·7274.
Then $s = \frac{b\,c}{a}$

‡ Pro. 17th March, 1851.

§ In Con. 8th March, 1852.

|| Lieut. DeLisle in para. 7 of his letter observes, that the average weight of a cubic foot (49 lbs.) was raised to more than 51 lbs. by 2 sharp bumps of the box.

31. In para. 3 of Lieut. DeLisle's letter, he states the Standard Bombay Measure for 1 Maund, to be 2,950 cubic inches to $82\frac{2}{7}$ lbs., or a specific gravity of ·773.

32. In para. 9, he actually weighed a box of the capacity of 2941·44 cubic inches, and found it weigh 83·9 lbs. giving a specific gravity of ·791.

33. The Salt used was "medium sized grain" and somewhat heavier than the coarse black salt, "and the box shaken before striking off."

34. When the box was not shaken, and trials made with 3 different kinds of salt, viz., coarse, medium and fine, the average came out 49 lbs. to 1 cubic foot, or specific gravity ·7862. These all differ from the standard finally adopted, viz., of ·7803.

35. The Board have also referred to the account of certain trials of Salt weighing, given in Major Jervis' work on "Indian Metrology" page 49. It appears from this, that the "phura" (or purrah) is a mun (maund) measure of Salt—and speaking of the "extensive Salt works at Pen" he states, that he computes the cubical contents and average weight of various measures from the "Neelva" of 33·553 cubic inches to the "Ana" of 5760 Neectwas. The Purrah was of a capacity of 3221 cubic inches, and weighed 103·7 lbs. of Salt, giving a specific gravity of ·895, whilst a less capacious measure—the "Adolee"—of 134·221 cubic inches, gave a weight of 4·3 lbs. or a specific gravity of ·888.

36. Dr. Ure in his "Dictionary of Arts" states, that when a duty by weight was levied on Salt, 1 Bushel (2218·2 cubic inches) was estimated to contain 56 lbs. Captain Buckle in the first of his letters referred to in para. 13 of these Proceedings, states, that it was originally 65 lbs. and the Board are inclined to think, that the reduction was made, rather to ease the duty (since abolished) than to obtain greater accuracy. At one Imperial Bushel to 56 lbs., the specific gravity would be ·700— at 65 lbs, ·812.

37. The Board will next refer to Captain Buckle's experiments which were made with every care at the Mint. The following abstracts will shew the results, the Specific Gravity being calculated by the formula given in para. 26 of these Proceedings.

(I.) Letter of 5th December, 1846.

Cylinders. *Diameter.*		*Depth.*		*Cubic Inches.*			*lbs.*	*Specific Gravity.*
12	×	13	=	1470 2	=	$\frac{1}{2}$ Maund, or,	41·14	·776
10	×	$12\frac{13}{16}$	=	1006·33	=	$\frac{1}{3}$ Maund, or,	27·43	·766
10	×	$9\frac{10}{16}$	=	756	=	$\frac{1}{4}$ Maund, or,	20·57	·756

This Salt was "old dry," and the Measures filled by lightly pouring. If rocked, the ¼ Maund was found to hold 10 per cent more in weight, and the two others about 17 per cent. It will be observed, that on account of different dimensions altering the *compression*, the cubic contents of the ½ Maund are less than double the ¼ Maund. Had it been doubled, it would have held 1690 Tolas. instead of 1600.

(II.) Letter of 24th April, 1847.

Cylinders. *Diameter.*		*Depth.*		*Cubic Inches.*			*lbs.*	*Specific Gravity.*
8	×	29	=	1457·7	=	½ Maund, or,	41·14	·782
8	×	$10\frac{10}{16}$	=	735·1	=	¼ Maund, or,	20·57	·777

It was this narrow ¼ Maund that the Board preferred, (vide para. 15 of these Proceedings), though, subsequently, it was determined to retain the Mercal of 828⅓ cubic inches.

38. The Board will now, lastly, refer to the experiments made by their orders, the results of which are shewn in the enclosure in their letter to Government of 20th January 1848. No. 1 of this enclosure, (copy of which is submitted herewith), adverts to the experiments at Nellore and Madras, (as also those at Chingleput which were not reported with any detail). No. 2 refers to the experiments made in the Board's Office. Taking the *long ¼ Maund* as a standard of comparison, (since that had the preference, and comes nearest to the Mercal in use), we have

Nellore, ...	21·05 lbs.*		
Madras, ...	23·10 ,,		
Chingleput,†	21·14 ,,		
Board (slightly shaken,)......	21·26 ,,	...	lb. oz. 22·15, 21·6, 19·8
Board (lightly poured in,)	22·37 ,,	...	23·10, 21·6, 23·9, 20·14
¼ Maund, ...	20·57 ,,		

These would tend to shew that even where the salt was very lightly poured in, (in the manner tried by Captain Buckle), that his ¼ Maund Measure of 735 cubic inches,‡ when used by native hands, holds some-

* 350 Tolas equal 9 lbs. avoirdupois exactly.

† Taking 4 per cent. as the excess over 800 Tolas.

‡ Diameter 8 by depth 14⅝.

what more, say 21·26 lbs. which would give a specific gravity of ·802. But the Board are inclined to believe, that in ordinary native measuring, this very light pouring can never be expected: there will always be some shaking or jolting, and they would prefer taking, as a general standard the result of their own trials when the salt was "slightly shaken," say 22·3 lbs. to the measure of 735 cubic inches giving a specific gravity of ·844. This is somewhat more than the present rate, as shewn in para. 26 to be ·8264, but considering all the discrepancies, the Board have come to the conclusion, that it is not advisable to disturb the present convenient arrangement of 120 Maunds to a Garce of 400 Salt Mercals, or to introduce into this Presidency, the rate of conversion proposed by Lieut. DeLisle, except in the special case of the district of Malabar.

39. The discrepancies above adverted to may be thus summed up.

	Specific Gravity.
Lieut. DeLisle's weighing of a box 2941·44 cubic inches, see para. 9 of his letter,	·791
Average of 3 kinds of Salt not shaken,	·786
Standard adopted by Lieut. DeLisle,	·7803
Bombay former Standard (2950 cubic inches to 1 Maund,).	·773
Major Jervis' trial of Phura,	·895
Do. do. Adolee,	·888
English Duty rate 56 lbs. = 1 Bushel,	·700
Do. do. 65 lbs. = 1 Bushel,	·812
Captain Buckle with wide ¼ Maund,	·756
Do. do. with narrow ¼ Maund,	·777
Mofussil and Board's trials with ¼ Maund lightly poured in,	·802
Board's trials with slight shaking,	·844
Rate in use at present in Madras 3,31,333½ cubic inches to 120 Maunds,	·8264

40. At the rate assumed by Lieut. DeLisle, the Madras Garce would be equal to 113·34 Indian Maunds.

W. H. Bayley,
Secretary.

No. 1.

	Weight of Half and Quarter Maund.	Nellore. Salt poured in lightly with basket struck closely.	Nellore. Difference between columns 2 and 3.	Nellore. Centage.	Madras. Salt poured in loosely and struck off.	Madras. Difference between columns 2 and 6.	Madras. Centage.	Remarks.
1	2	3	4	5	6	7	8	9
	Tolas.	*Tolas.*	*Tolas.*		*Tolas.*	*Tolas.*		
Half Maund long measure,	1,600	1,701	101	$6\frac{5}{16}$	1,744	144	9	Mr. Huddleston, Collector of Madras, is of opinion, that the Short Quarter Maund Measure is the one best calculated for general introduction.
Do. do. short do.	1,600	1,636	36	$2\frac{1}{4}$	1,784	184	$11\frac{1}{2}$	
Quarter Maund long do.	800	818	18	$2\frac{1}{4}$	899	99	$12\frac{5}{8}$	
Do. do. short do.	800	836	36	$4\frac{1}{2}$	901	101	$12\frac{3}{8}$	Mr Smith, Collector of Nellore, is in favor of the long Quarter Maund Measure of 8 inches diameter.

Chingleput.

In 100 Maunds of Salt the result shows a difference of between 3 and 5 per cent. Mr. Freese is in favor of the $\frac{1}{2}$ Maund 12 Inches Diameter, (Short Measure,) and $\frac{1}{4}$ Maund 8 Inches Diameter, (Long Measure,) but gives the preference to the latter, as the best adapted for general introduction.

No. 2.

	Fuslies.	Result.	Difference between columns 1 and 3.	Centage.	Remarks.
1	2	3	4	5	6
		lbs.	lbs.		
Quarter Maund long Measure, or lb. $20\frac{9}{16}$	Salt of Fusly 1255 moist,	$23\frac{10}{16}$	$3\frac{1}{16}$	$14\frac{14}{16}$	Slightly shaken.
	Do. do. do.	$22\frac{29}{32}$	$2\frac{11}{32}$	$11\frac{6}{16}$	Poured in lightly.
	Do. Fusly 1254 do.	$21\frac{6}{16}$	$\frac{13}{16}$	$3\frac{5}{16}$	Slightly shaken.
	Do. do. do.	$23\frac{9}{16}$	3	$14\frac{9}{16}$	More shaken.
	Do. do. do.	$21\frac{2}{16}$	$\frac{9}{16}$	$2\frac{12}{16}$	Poured in lightly.
	Do. Fusly 1256 dry,	$20\frac{14}{16}$	$\frac{5}{16}$	$1\frac{8}{16}$	Slightly shaken.
	Do. do. do.	$19\frac{8}{16}$	$1\frac{1}{16}$	$5\frac{3}{16}$	Poured in lightly.

W. H Bayley,

Secretary.

K.

To

W. H. Bayley, Esq.
Secretary to the Board of Revenue.

Sir,

I have the honor to forward, herewith, the Results obtained by the Quantitative Analysis of 22 samples of Sea Salt, that is to say, of all those samples of Sea Salt which I was instructed to examine. The place from whence each sample was sent, with the number placed on the case containing it, are given in a separate list (Z). The number belonging to each sample is also placed at the head of the Results of the Analysis for that number, so that each kind of salt can readily be identified. The methods employed in the analysis of these salts, as well as those of calculating and checking the results, are also given, together with a table shewing the Formulæ and Atomic constitution of the Compounds obtained in analysis, by the aid of which the calculations referred to, will readily be understood. The per centage calculations originally included the moisture found present, but for the advantage of comparison, the same calculation on one hundred parts of *dry salt* has been added. In laying these results before the Revenue Board, I beg leave to assure them, that I have spared no exertion or labor to complete, up to this point, the task assigned me, but the innumerable processes required, the care and time occupied in conducting them single handed, have prevented me from bringing the work to a close at an earlier period.

I have, &c.,
J. Mayer,
Chemical Examiner.

Madras,
7th June, 1854.

The methods of proceeding in conducting the Analysis now to be given were as follows:—

Moisture was determined by drying at 212° F., and keeping it at that temperature till the sample ceased to lose weight.

Sand, &c., was determined by separation on a weighed filter, and a re-weighing.

Soluble Organic matters were determined by allowing a solution of the specimen to stand for a few days, separating the films or

vegetations formed, by a weighed filter and re-weighing; in most cases, however, they were inappreciable by the balance, though very evident to the sight.

The Formula by which the Lime has been calculated, is C_a O. C_2 O_3 H O, by making use of it the ignition ordinarily practised may be dispensed with, the results thus obtained are not quite so exact as those obtained by ignition which drives off the H O and C O—the Lime being left in the state of Carbonate C_a O. C O_2 *i. e.* if the heat is not carried too far, in that case C O_2 is also driven off and C_a O, Caustic Lime remains, it is true, that by subsequent processes, the Lime may be brought back to the state of Carbonate and as such determined, but it was not thought necessary to increase the labor really requisite, to avoid a chance of error shewn by Fresemies, page 567, not to exceed ·07 per cent. The example given at the conclusion of these remarks, will shew every method of calculation adopted, not merely for Lime but for each Base and Acid.

Magnesia was calculated from the weight of the Pyrophosphate obtained in the usual way.

Soda was determined as Sulphate after the separation of Insoluble Impurities, the separation of Lime and Magnesia by Baryta water (excess) filtration to get rid of the Lime and Magnesia precipitated, the addition of Carbonate of Ammonia (excess) to get rid of the Baryta evaporation, and ignition to get rid of Ammoniacal Salts, and the addition of Sulphuric Acid, the Sulphate of Soda thus formed was evaporated to dryness and fused in a Platinum Crucible, allowed to cool and weighed.

The results set down are the mean of several determinations. The Salts under examination are not altogether homogeneous—the amount of insoluble matters, chiefly sand, varying in different parts of the same sample, in one instance to the extent of nearly 4 per cent. The amount of moisture contained also varies according to circumstances. A sample of Salt examined about 6 weeks since, shewed a per centage of moisture = 7·8190, it now gives 6·3801, in other cases the difference has exceeded 2 per cent.

The Tables A and B give *direct* results, and sufficiently explain themselves—a mere per centage calculation of the simplest kind being required.

The Tables that follow B give *indirect* results, inasmuch as the

substance to be determined is not separated alone, but in combination. The compounds, however, being in every instance of known constitution, that is to say, numerous experiments made by different Chemists in different countries have shewn, that a certain and unchanging weight of one of the constituents of these compounds, is united to the other or others, each of which also has its unchanging proportional weight—thus, in the first of these compounds C_a O. $\overline{O}$. H O Hydrated Oxalate of Lime. A weight of Lime, indicated by the number 28, unites with a weight of Oxalic $\overline{A}$ indicated by the number 36, and it has been also ascertained, that until a high temperature is employed, these proportional weights of Lime and Oxalic $\overline{A}$, are united to a weight of water indicated by the number 9—the total of these figures gives 73 as the proportional representative number of Hydrated Oxalate Lime.

The use made of these numbers in calculation, is founded on the fact, that whether it is a ton or a grain, the proportions of Lime, Oxalic Acid and Water, will still be the same in Hydrated Oxalate of Lime—the calculation then proceeds thus—

Table C shews that 50 grains of the substance give ·2085 of Hydrated Oxalate of Lime—100 parts consequently give ·4170 of the same compound, and if 73 parts of Hydrated Oxalate of Lime contain 28 of Lime, then ·4170 will contain a proportional quantity, which is found to be ·1600.

Table D shews that the Magnesia was not obtained in a separate form but as the Pyrophosphate, the constitution of this compound is also well known—it has the Formula 2 M_g O P O_5, and the proportional representative number or equivalent of this, is 112·4, of which 40·4 represents the Magnesia, 72 the Phosphoric $\overline{A}$, the calculation then proceeds as before but with different factors. The weight of 2 M_g O P O_5 found as shewn in this Table, is (from 50 grains of substance) ·6315, and the per centage is 1·2730, and the quantity of Magnesia contained in this weight is ·4540; for if 112·4 contain 40·4, 1·2730 must contain a proportional quantity. For the remaining substances it will only be necessary to refer to the Table H shewing the Formulæ and Constituents and Proportional Numbers of the substances obtained in these Analyses, this will enable any one to check the ultimate results with the greatest facility.

The absence of Potash in these specimens of Salt was proved by the use of the Bichloride of Platinum, aided by the use of Alcohol and Hydrochloric Acid. After standing 24 hours, these re-agents failed to give any precipitate with any one of these samples of Salt. It is

nevertheless very possible, that minute quantities of Potash may occasionally be present in any one of these Salts, the degree of care in preparation; or the period of the season at which the sample was collected; the Salt Pan having been recently formed; the quality of the soil of which it was formed; its having been in use for some time; &c.; will all, to some extent, no doubt, influence the quality of the product obtained, and therefore, though the average quality of Salt from the same place will be nearly the same, minute differences will be found to exist. The Acids and the Bases have been arranged, as far as possible, according to well known affinities, the strongest Bases being supposed to exist in combination with the strongest Acids. An useful control, by the aid of Alcohol, might, had time permitted, have been adopted, as the insolubility of the Sulphates, and the solubility of the Chlorides would have afforded a means of ascertaining with considerable precision, the actual grouping of the Acids and Bases in question.

TABLE A.

Shewing the Per Centage Amount of Interstitial Moisture in each Sample of Sea Salt.

No. of Sample.	Weight of each Sample taken.	Amount of loss after drying at 212°.	Per Centage of water contained.
		Grains.	*Grains.*
1	5 Grains Troy.	·3145	6·2900
2	do.	·3646	7·2920
3	do.	·3755	7·5100
4	do.	·3650	7·3010
5	do.	·3296	6·5929
6	do.	·3006	6·0120
7	do.	·3645	7·2903
8	do.	·3509	7·0190
9	do.	·3608	7·2170
10	do.	·3609	7·2187
11	do.	·3910	7·8210
12	do.	·3651	7·3030
13	do.	·3006	6·0119
14	do.	·3908	7·8152
15	do.	·3609	7·2191
16	do.	·3400	6·8012
17	do.	·3105	6·2108
18	do.	·3410	6·8201
19	do.	·3045	6·0913
20	do.	·3515	7·0312
21	do.	·3476	6·9523
22	do.	·3746	7·4930

TABLE B.

Shewing the Per Centage Amount of Matters insoluble in water contained in each dried Specimen of Sea Salt.

No. of Sample.	Weight of substance taken for examination.	Weight of Filter after drying at 212°.	Weight of Filter, + Matters insoluble in water after drying at 212°.	Per Centage, Matter insoluble in water chiefly sand.
1	50 Grains.	5·6200	6·4200	1·6000
2	do.	6·3410	7·3555	2·0310
3	do.	5·4100	6·8125	2·8050
4	do.	6·4200	7·5050	2·1700
5	do.	6.2100	7·9715	3·5230
6	do.	6·3100	7·3191	2·0182
7	do.	6·5200	8·3745	3·7090
8	do.	6·8200	7·1711	2·7022
9	do.	6·9200	6·8305	1·8210
10	do.	5·5100	7·5206	4·0213
11	do.	5·8200	7·7065	3·7730
12	do.	5·4100	7·6765	4·5330
13	do.	5·8000	6·8466	2·0932
14	do.	6.0800	8·1915	4·2231
15	do.	6·0500	7·4659	2·8318
16	do.	5.6300	7·5373	3·8146
17	do.	5·7100	7·5250	3·6210
18	do.	5·8200	7·3656	3·0912
19	do.	5·6600	7.0760	2·8321
20	do.	6·1200	7·6035	2·9670
21	do.	6·2700	8·1713	3·8026
22	do.	6·3000	8·5915	4·5831

TABLE C.

Shewing the Per Centage Weight of Lime contained in each Sample of Sea Salt.

No. of Sample.	Weight of substance taken.	Mean weight of C_a O $\overline{O}$ H O obtained.	Per Centage of C_a O contained.
1	50 Grains.	·2085	·1600
2	do.	·1799	·1380
3	do.	·4041	·3100
4	do.	·2099	·1610
5	do.	·6219	·4771
6	do.	·6157	·4723
7	do.	1·4785	1·1342
8	do.	1·1477	·8805
9	do.	1·0637	·8160
10	do.	1·1471	·8800
11	do.	·4993	·3830
12	do.	·7099	·5446
13	do.	·5416	·4155
14	do.	·6939	·5323
15	do.	·4446	·3413
16	do.	·5987	·4538
17	do.	·5229	·4012
18	do.	·5227	·4010
19	do.	·6886	·5283
20	do.	·4980	·3820
21	do.	·8099	·6213
22	do.	1·2097	·9280

TABLE D.

Shewing the Per Centage Weight of Magnesia contained in each Sample of Sea Salt.

No. of Sample.	Weight of substance taken.	Mean weight of $2 M_g O P O_5$ obtained.	Per Centage of $M_g O$ contained.
1	50 Grains.	·6315	·4540
2	do.	·4201	·3020
3	do.	·5678	·4082
4	do.	·4208	·3025
5	do.	·5578	·4010
6	do.	·5747	·4132
7	do.	·6979	·5018
8	do.	·6677	·4801
9	do.	·8371	·6018
10	do.	·4203	·3022
11	do.	·7293	·5243
12	do.	·5172	·3718
13	do.	·6961	·5013
14	do.	·6695	·4813
15	do.	·5586	·4016
16	do.	·5397	·3880
17	do.	·6011	·4321
18	do.	·5461	·3926
19	do.	·5707	·4103
20	do.	·5868	·4218
21	do.	·4119	·2961
22	do.	·4620	·3321

TABLE E.

Shewing the Per Centage Weight of Sodium contained in each Sample of Sea Salt.

No. of Sample.	Weight of Substance taken.	Mean Weight of $N_a O S O_3$ obtained.	Per Centage of N_a contained
1	50 Grains.	54·7085	35·4450
2	do.	52·9433	34·3013
3	do.	52·9938	34·3340
4	do.	54·3315	35·2007
5	do.	52·9575	34·3105
6	do.	54·4920	35·3047
7	do.	51·2823	33·2252
8	do.	524·909	34·0082
9	do.	53·4128	34·6055
10	do.	51·4083	33·3068
11	do.	52·0947	33·7512
12	do.	51·8466	33·5908
13	do.	54·0603	35·0250
14	do.	52·3334	33·9062
15	do.	53·2817	34·5206
16	do.	53·3753	34·5812
17	do.	52·2817	33·8727
18	do.	52·8456	34·2380
19	do.	54·1051	35·0608
20	do.	53·0998	34·4027
21	do.	52·8437	34·2368
22	do.	51·6572	33·4681

TABLE F.

Shewing the Per Centage Weight of Sulphuric Acid contained in each Sample of Sea Salt.

No. of Sample.	Weight of Substance taken.	Mean Weight of B_a O So_3 obtained.	Per Centage of So_3 contained.
1	5 Grains.	·0230	·1578
2	do.	·0300	·2058
3	do.	·0416	·2855
4	do.	·0300	·2058
5	do.	·0470	·3222
6	do.	·0392	·2692
7	do.	·0539	·3692
8	do.	·0347	·2393
9	do.	·0319	·2188
10	do.	·0320	·2199
11	do.	·0428	·2940
12	do.	.0269	·1846
13	do.	·0438	·3008
14	do.	·0428	·2941
15	do.	·0269	·1846
16	do.	·0286	·1982
17	do.	·0279	·1914
18	do.	·0319	·2188
19	do.	·0408	·2803
20	do.	·0488	·3350
21	do.	·0497	·3410
22	do.	·0757	·5196.

TABLE G.

Shewing the Per Centage Weight of Chlorine contained in each Sample of Sea Salt.

No. of Sample.	Weight of Substance taken.	Mean Weight of Ag Cl obtained.	Per Centage of Cl contained.
1	5 Grains.	11·2377	55·6000
2	do.	10·9862	54·3569
3	do.	10·9403	54·1590
4	do.	10·9968	54·4112
5	do.	10·8680	53·7713
6	do.	11·4033	56·5603
7	do.	10·6122	52·5072
8	do.	10·8340	53·5900
9	do.	11·1395	55·1158
10	do.	10·6724	52·8058
11	do.	10·7757	53·2892
12	do.	10·7404	53·1420
13	do.	11·1190	55·0156
14	do.	10·8466	53·6660
15	do.	11·0171	54·5100
16	do,	11·0414	54·6300
17	do.	10·7540	53·2090
18	do.	10·9056	53·9593
19	do.	11·1307	55·0721
20	do.	10·7729	53·3021
21	do.	10·9044	53·9520
22	do.	10·7035	52·9478

TABLE H.

Shewing the Formulæ, Constituents and Proportional Numbers of the Substances obtained in these Analyses.

Name of Substance, its Formulæ and Proportional No.	Constituents. Proximate.	Constituents. Ultimate.	Proportional Numbers shewing the relative weights on the Hydrogen scale of each Constituent.	
Hydrated Oxalate of Lime $C_a\,O\,C_2\,O_3\,H\,O$ 73	Lime,	Calcuim, 20 Oxygen, 8	= 28	= 73
	Oxalic $\bar{A}$.	Carbon 2 Eqts. 12 Oxygen 3 do. 24	= 36	
	Water,	Hydrogen. 1 Oxygen, 8	= 9	
Pyrophosphate of Magnesia $2\,M_g\,O\,P\,O_5$. 112·4	Magnesia,	2 Eqts. Magnesium, 24·4 Oxygen 2 Eqts. 16	= 40·4	= 112·4
	Phosphoric $\bar{A}$	Phosphorus, 32 Oxygen 5 Eqts. 40	= 72	
Sulpate of Soda $N_a\,O.\,S\,O_3$ 71	Soda,	Sodium, 23 Oxygen, 8	= 31	= 71
	Sulphuric $\bar{A}$.	Sulphur, 16 Oxygen, 24	= 40	
Sulphate of Baryta $B_a\,O.\,S\,O_3$ 116·64	Baryta,	Barium, 68·64 Oxygen, 8	= 76·64	= 116·64
	Sulphuric $\bar{A}$.	Sulphur, 16 Oxygen, 24	= 40	
Chloride of Silver $A_g\,Cl$ 143·5		Silver, 108 Chlorine, 35·5	....	= 143·5

Z.

List of the Localities from whence each Sample of Salt examined, has been furnished.

Names of the Talooks from which the samples of Salt have been sent.	Numbers of the samples furnished by each Talook.	Names of the Talooks from which the samples of Salt have been sent.	Numbers of the samples furnished by each Talook.
Chitwail,	1, 2	Doopond,	10
Budwail,	3, 4	Poclevendalah,	11, 16, 20
Chennoor,	5, 6	Cumbum,	12
Royachoty,	7, 13, 14	Cumlapoor,	15, 22
Goorrumcondah,	8	Poonganoor,	17
Sidhout,	9	Jummulmudgoo.	18, 21
		Doovoor,	19

No. 1.

SEA SALT.

Moisture..................	6·2900	Magnesia—2 M_g O P O_5 ...	·4540
Sand and Insoluble Organic Matters..................	1·6000	Sodium—N_a O So_3............	35·4450
Soluble Organic Matters.. ...	·0200	Sulphuric $\bar{a}$— B_a O So_3.......	·1578
Lime—from C_a O, C_2O_3 H O.	·1600	Chlorine—A_g Cl..............	55·6000

The following Composition of this Salt has been deduced from the above Numbers.

Moisture......................	6·2900	Sulphate of Lime......	·2682
Insoluble Matters...........	1·6000		99·4771
Chloride of Sodium....	90·0750	Loss...........................	·5229
„ Magnesium..	1·1454		
„ Calcium	·0985		100·0000

If moisture be excluded, the per centage of Chloride of Sodium = 96·12.

No. 2.

SEA SALT.

Moisture......	7·2920	Magnesia...........	·3020
Sand and Insoluble Organic Matters...........	2·0310	Sodium........................	34·3013
Soluble Organic Matters......	·0050	Sulphuric Acid...........	·2058
Lime..............................	·1380	Chlorine......	54·3569

COMPOSITION.

Moisture......	7·2920	Sulphate of Magnesium....	·0130
Insoluble Matters..............	2·0310		
Soluble Matters................	·0050		99·0499
Chloride of Sodium....	88·6582	Loss............................	·9501
„ Magnesium.	·7156		
Sulphate of Lime...............	·3351		100·0000

If moisture be excluded, the per centage of Chloride of Sodium = 95·63.

No. 3.

SEA SALT.

Moisture	7·5100	Magnesia	·4082
Sand and Insoluble Organic Matters	2·8050	Sodium	34·3340
Soluble Organic Matters	traces	Sulphuric Acid	·2855
Lime	·3100	Chlorine	54·1590

COMPOSITION.

Moisture	7·5100	Sulphate of Lime	·4853
Insoluble Matters	2·8050		
Soluble Matters	traces.		99·6251
Chloride of Sodium	87·6094	Loss	·3749
„ Magnesium	·9699		
„ Calcium	·2455		100·0000

If moisture be excluded, the per centage of Chloride of Sodium = 94·72.

No. 4.

SEA SALT.

Moisture	7·3010	Magnesia	·3025
Sand and Insoluble Organic Matters	2·1700	Sodium	35·2007
Soluble Organic Matters	·0150	Sulphuric Acid	·2058
Lime	·1610	Chlorine	54·4112

COMPOSITION.

Moisture	7·3010	Chloride of Calcium	·0348
Insoluble Matters	2·1700	Sulphate of Lime	·3498
Soluble Matters	·0150		
Chloride of Sodium	89·5307		100·1196
„ Magnesium	·7183		

If moisture be excluded, the per centage of Chloride of Sodium = 96·59.

No. 5.

SEA SALT.

Moisture	6·5929	Magnesia	·4010
Sand and Insoluble Organic Matters	3·5230	Sodium	34·3105
Soluble Organic Matters	traces	Sulphuric Acid	·3222
Lime	·4771	Chlorine	53·7713

COMPOSITION.

Moisture	6·5929	Sulphate of Lime	·5477
Insoluble Matters	3·5230		99·0648
Chloride of Sodium	87·2570	Loss	·9352
" Magnesium	·9523		
" Calcium	·1919		100·0000

If moisture be excluded, the per centage of Chloride of Sodium = 93·41.

No. 6.

SEA SALT.

Moisture	6·0120	Magnesia	·4132
Sand and Insoluble Organic Matters	2·0182	Sodium	35·3047
Soluble Organic Matters	traces	Sulphuric Acid	·2692
Lime	·4723	Chlorine	56·5603

COMPOSITION.

Moisture	6·0120	Sulphate of Lime	·4554
Insoluble Matters	2·0182		99·8306
Chloride of Sodium	89·7967	Loss	·1694
" Magnesium	·9816		
" Calcium	·5667		100·0000

If moisture be excluded, the per centage of Chloride of Sodium = 95·97.

No. 7.

SEA SALT.

Moisture	7·2903	Magnesia	·5018
Sand and Insoluble Organic Matters	3·7090	Sodium	33·2252
Soluble Organic Matters	traces	Sulphuric Acid	·3692
Lime	1·1342	Chlorine	52·5072

COMPOSITION.

Moisture	7·2903	Sulphate of Lime	·6276
Insoluble Matters	3·7090		99·1448
Chloride of Sodium	84·5068	Loss	·8552
,, Magnesium	1·2751		
,, Calcium	1·7360		100·0000

If moisture be excluded, the per centage of Chloride of Sodium = 91·15.

No. 8.

SEA SALT.

Moisture	7·0190	Magnesia	·4801
Sand and Insoluble Organic Matters	2·7022	Sodium	34·0082
Soluble Organic Matters	traces	Sulphuric Acid	·2393
Lime	·8805	Chlorine	53·5900

COMPOSITION.

Moisture	7·0190	Sulphate of Lime	·4068
Insoluble Matters	2·7022		98·9657
Chloride of Sodium	86·4947	Loss	1·0343
,, Magnesium	1·1799		
,, Calcium	1·1631		100·0000

If moisture be excluded, the per centage of Chloride of Sodium = 93·02.

No. 9.

SEA SALT.

Moisture	7·2170	Magnesia	·6018
Sand and Insoluble Organic Matters	1·8210	Sodium	34·6055
Soluble Organic Matters	traces	Sulphuric Acid	·2188
Lime	·8160	Chlorine	55·1158

COMPOSITION.

Moisture	7·2170	Chloride of Calcium	1·3139
Insoluble Matters	1·8210	Sulphate of Lime	·3719
Chloride of Sodium	88·0160		
„ Magnesium	1·3460		100·0858

If moisture be excluded, the per centage of Chloride of Sodium = 94·86.

No. 10.

SEA SALT.

Moisture	7·2187	Magnesia	·3022
Sand and Insoluble Organic Matters	4·0213	Sodium	33·3068
Soluble Organic Matters	traces	Sulphuric Acid	·2199
Lime	·8800	Chlorine	52·8058

COMPOSITION.

Moisture	7·2187	Sulphate of Lime	·3738
Insoluble Matters	4·0213		98·4827
Chloride of Sodium	84·7118	Loss	1·5173
„ Magnesium	·7180		
„ Calcium	1·4391		100·0000

If moisture be excluded, the per centage of Chloride of Sodium = 91·30.

No. 11.

SEA SALT.

Moisture......	7·8210	Magnesia............................	·5243
Sand and Insoluble Organic Matters........................	3·7730	Sodium............................	33·7512
Soluble Organic Matters....	traces	Sulphuric Acid......	·2940
Lime......	·3830	Chlorine......	53·2892

COMPOSITION.

Moisture........................	7·8210	Sulphate of Lime...........	·4998
Insoluble Matters...........	3·7730		99·5347
Chloride of Sodium....	85·8452	Loss.............................	·4653
" Magnesium......	1·2453		100·0000
" Calcium..........	·3504		

If moisture be excluded, the per centage of Chloride of Sodium = 96·38.

No. 12.

SEA SALT.

Moisture............	7·3030	Magnesia..........................	·3718
Sand and Insoluble Organic Matters....	4·5330	Sodium...........	33·5908
Soluble Organic Matters.....	traces	Sulphuric Acid.	·1846
Lime..........................	·5446	Chlorine..........................	53·1420

COMPOSITION.

Moisture............	7·3030	Sulphate of Lime......	·3138
Insoluble Matters............	4·5330		99·3039
Chloride of Sodium..........	85·4474	Loss............................	·6961
" Magnesium......	·8831		100·0000
" Calcium...	·8236		

If moisture be excluded, the per centage of Chloride of Sodium = 92·17.

No. 13.

SEA SALT.

Moisture	6 0119	Magnesia	·5013
Sand and Insoluble Organic Matters	2·0932	Sodium	35·0250
Insoluble Organic Matters	traces	Sulphuric Acid	·3008
Lime	·4155	Chlorine	55·0156

COMPOSITION.

Moisture	6·0119	Sulphate of Lime	·5113
Insoluble Matters	2·0932		99·3268
Chloride of Sodium	89·0853	Loss	·6732
„ Magnesium	1·1906		100·0000
„ Calcium	·4345		

If moisture be excluded, the per centage of Chloride of Sodium = 94·67.

No. 14.

SEA SALT.

Moisture	7·8152	Magnesia	·4813
Sand and Insoluble Organic Matters	4·2231	Sodium	33·9062
Soluble Organic Matters	traces	Sulphuric Acid	·2941
Lime	·5323	Chlorine	53·6660

COMPOSITION.

Moisture	7·8152	Chloride of Calcium	·6493
Insoluble Matters	4·2231	Sulphate of Lime	.4998
Chloride of Sodium	86·2366		100·5671
„ Magnesium	1·1431		

If moisture be excluded, the per centage of Chloride of Sodium = 93·54.

No. 15.

SEA SALT.

Moisture	7·2191	Magnesia	·4016
Sand and Insoluble Organic Matters	2·8318	Sodium	34·5206
Soluble Organic Matters	traces	Sulphuric Acid	·1846
Lime	·3413	Chlorine	54·5100

COMPOSITION.

Moisture	7·2191	Sulphate of Lime	·3138
Insoluble Matters	2·8318		99·7391
Chloride of Sodium	87·8024	Loss	·2609
" Magnesium	1·1518		
" Calcium	·4202		100·0000

If moisture be excluded, the per centage of Chloride of Sodium = 94·63.

No. 16.

SEA SALT.

Moisture	6·8012	Magnesia	·3880
Sand and Insoluble Organic Matters	3·8146	Sodium	34·5812
Soluble Organic Matters	traces	Sulphuric Acid	·1982
Lime	·4538	Chlorine	54·6300

COMPOSITION.

Moisture	6·8012	Chloride of Calcium	·6246
Insoluble Matters	3·8146	Sulphate of Lime	·3369
Chloride of Sodium	87·9565		
" Magnesium	·9215		100·4553

If moisture be excluded, the per centage of Chloride of Sodium = 94·36.

No. 17.

SEA SALT.

Moisture	6·2108	Magnesia	·4321
Sand and Insoluble Organic Matters	3·6210	Sodium	33·8727
Soluble Organic Matters	traces	Sulphuric Acid	·1914
Lime	·4012	Chlorine	53·2090

COMPOSITION.

Moisture	6·2108	Sulphate of Lime	·3254
Insoluble Matters	3·6210		
Chloride of Sodium	86·1544		97·8729
„ Magnesium	1·0263	Loss	2·1271
„ Calcium	·5350		100·0000

If moisture be excluded, the per centage of Chloride of Sodium = 91·85.

No. 18.

SEA SALT.

Moisture	6·8201	Magnesia	·3926
Sand and Insoluble Organic Matters	3·0912	Sodium	34·2380
Soluble Organic Matters	traces	Sulphuric Acid	·2188
Lime	·4010	Chlorine	53·9593

COMPOSITION.

Moisture	6·8201	Sulphate of Lime	·3719
Insoluble Matters	3·0912		
Chloride of Sodium	87·0879		98·7950
„ Magnesium	·9325	Loss	1·2050
„ Calcium	·4914		100·0000

If moisture be excluded, the per centage of Chloride of Sodium = 94·36.

No. 19.

SEA SALT.

Moisture	6·0913	Magnesia	·4103
Sand and Insoluble Organic Matters	2·8321	Sodium	35·0608
Soluble Organic Matters	traces	Sulphuric Acid	·2803
Lime	·5283	Chlorine	55·0721

COMPOSITION.

Moisture	6·0913	Chloride of Calcium	·7079
Insoluble Matters	2·8321	Sulphate of Lime	·4515
Chloride of Sodium	89·1680		
,, Magnesium	·9745		100·2253

If moisture be excluded, the per centage of Chloride of Sodium = 94·96.

No. 20.

SEA SALT.

Moisture	7·0312	Magnesia	·4218
Sand and Insoluble Organic Matters	2·9670	Sodium	34·4027
Soluble Organic Matters	traces	Sulphuric Acid	·3350
Lime	·3820	Chlorine	53·3021

COMPOSITION.

Moisture	7.0312	Sulphate of Lime	·5695
Insoluble Matters	2·9670		
Chloride of Sodium	87·5025		99·3647
,, Magnesium	1·0018	Loss	·6353
,, Calcium	·2927		100·0000

If moisture be excluded, the per centage of Chloride of Sodium = 94·12.

No. 21.

SEA SALT.

Moisture	6·9523	Magnesia	·2961
Sand and Insoluble Organic Matters	3·8026	Sodium	34·2368
Soluble Organic Matters	traces	Sulphuric Acid	·3410
Lime	·6213	Chlorine	53·9521

COMPOSITION.

Moisture	6·9523	Sulphate of Lime	·5797
Insoluble Matters	3·8026		
Chloride of Sodium	87·0805		99·8371
" Magnesium	·7033	Loss	·1629
" Calcium	·7187		100·0000

If moisture be excluded, the per centage of Chloride of Sodium = 93·58.

No. 22.

SEA SALT.

Moisture	7·4930	Magnesia	·3321
Sand and Insoluble Organic Matters	4·5831	Sodium	33·4681
Soluble Organic Matters	traces	Sulphuric Acid	·5196
Lime	·9280	Chlorine	52·9478

COMPOSITION.

Moisture	7·4930	Sulphate of Lime	·8833
Insoluble Matters	4·5831		99·9052
Chloride of Sodium	85·0384	Loss	·0948
" Magnesium	·7888		
" Calcium	1·1186		100·0000

If moisture be excluded, the per centage of Chloride of Sodium = 91·92.

L.

Memorandum shewing the Salt Establishments of each District, and the duties performed by each Officer.

ASSISTANT COMMISSIONER NORTHERN CIRCARS.

The Assistant Commissioner in the Northern Circars states, that in the five districts under the control of the Commissioner, the Salt Department is managed by the Collectors and their Assistants—there being no Uncovenanted Assistants employed as in Bengal. The following Table describes the several Offices and the salaries attached to them, particulars of which will be found elsewhere. The Ameen or Thanadar is the Head Superintending Officer, who is assisted by the Peishcar and Goomastahs in the preparation of accounts and sales of Salt, while the Duffadars and Peons are chiefly employed for guarding the Salt. The pay of the Native Establishments, he says, is altogether inadequate to the responsibilities of the duties; and a revision of the Establishments is under consideration.

SALT ESTABLISHMENTS IN THE NORTHERN CIRCARS.

No.	Districts.	Cotaurs.	Thanadars or Ameens.		Peishcars and Goomastahs.		Duffadars and Peons.		Total.	
			No. of Persons.	Monthly Salary.	No. of Persons.	Monthly Salary.	No. of Persons.	Monthly Salary.	No. of Persons.	Monthly Salary.
				Rs.		Rs.		Rs.		Rs.
1	Ganjam, ...	Ganjam, ...	1	25	1	5	25	76	27	106
		Nowpadah, ...	1	30	2	12	21	60	24	102
		Womaravilly, ...	1	25	1	5	19	60	21	90
		Munsoorcottah, ...	1	20	1	5	10	31	12	56
2	Vizagapatam, ...	Cooppili, ...	1	25	2	14	11	33	14	72
		Conadah, ...	1	30	1	3	3	12	5	45
		Nellimookkoo, ...	1	30	2	19	11	39	14	88
		Carassa, ...	1	35	3	31	18	59½	22	125½
3	Rajahmundry, ...	Pittapoor, ...	1	60	5	65	38	160	44	285
		Mogultore, ...	1	50	4	55	38	162	43	267
4	Masulipatam, ...	Pandrakah, ...	1	60	4	38	38	169	43	267
		Inoogoodoor, ...	1	30	2	20	22	99	25	149
5	Guntoor, ...	Chinna Ganjam, ...	1	60	10	114	56	301¾	67	475¾
		Nizampatam, ...	1	40	6	74	34	173	41	287
		Total...	14	520	44	460	344	1,435¼	402	2,415¼

GANJAM.

In Ganjam the establishment is represented as being very insufficient and miserably paid.* At the Hoozoor Office there is no servant specially set apart, as in most districts, to supervise the accounts. There is one Goomastah who has also to look after the Stamps and Maramut accounts. At each Pan there is a Goomastah whose pay varies from Rs. 20 to 30. He has charge of the cash chest, of the manufacture, measuring, heaping, and selling of the salt, the whole responsibility rests on him, though, generally, he is assisted by one of the Hoozoor servants, during the time of taking the Salt into Store. The next is the

* The Principal Assistant Collector submits, that the payment of 30 Rs. *monthly* to a man who sells *two lacs* of Rs. worth of salt, is quite insufficient to insure a good and honest servant.

Curnum, who writes the daily accounts of sales, &c. His pay is from Rs. 5 to 7. The Shroff, whose pay is from 2 to 5 Rupees, receives and examines all the money that is paid in by purchasers. The Golah Peon has charge of the Platform and Pans, and has Peons to watch them. Under him are Duffadars and Peons, according to the size of the pans. These Peons have also to escort remittances twice a month to the Hoozoor Treasury. The money is usually carried by the Measurers. The number of these Measurers varies according to the extent of the pans. They have to measure the salt when stored or sold, they also repair damages done to the heaps by rain or storm.

ESTABLISHMENT.

Grades.	Hoozoor Establishment.		Salt Cotaur of Ganjam.				Salt Cotaur of Munsoorcottah.				Salt Cotaur of Nowpadah.				Salt Cotaur of Womaravilly.				Total, including the Hoozoor Establishment		Remarks.
	Number of persons.	Pay for each per mensem.	Number of persons.	Pay for each per mensem.	Amount.	Amount of security required.	Number of persons.	Pay for each per mensem.	Amount.	Amount of security required.	Number of persons.	Pay for each per mensem.	Amount.	Amount of security required.	Number of persons.	Pay for each per mensem.	Amount.	Amount of security required.	Number of persons.	Pay per mensem.	
		Rs.		Rs.	Rs.	Rs.		Rs.	Rs.	Rs.		Rs.	Rs.	Rs.		Rs.	Rs.	Rs.		Rs.	
Goomastah, ...	1	20	1	25	25	2000	1	20	20	1000	1	30	30	6000	1	25	25	5000	5	120	In Ganjam and Womaravilly the Shroffs are borne on the books as Peons. In Munsoorcottah the Shroff draws the pay of a Measurer.
Curnums, ...	0	0	1	5	5	500	1	5	5	300	1	7	7	2000	1	5	5	1500	4	22	
Golah Peons, ...	0	0	1	12	12	500	1	10	10	300	1	15	15	2000	1	12	12	1500	4	49	
Shroff, ...	0	0	1	3	3	1000	1	2	2	300	1	5	5	2000	1	2½	2½	1500	4	12½	
Duffadar, ...	0	0	1	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	
Peons, ...	0	0	4	2½	10	0	4	2½	10	0	10	2½	25	0	5	2½	12½	0	23	57½	
Guard Peons,......	0	0	10	3	30	0	0	0	0	0	0	0	0	0	6	3½	21	0	16	51	
Measurers,.........	0	0	6	2	12	0	2	2	4	0	10	2	20	0	6	2	12	0	24	48	
Dundasees,........	0	0	2	2½	5	0	2	2½	5	0	0	0	0	0	0	0	0	0	4	10	
Saderwared,.......	0	0	0	0	½	0	0	0	½	0	0	0	1½	0	0	0	1	0	0	3½	
Total...	1	20	27	0	106½	0	12	0	56½	0	24	0	103½	0	21	0	91	0	85	377½	The annual cost of establishment is Rs. 4530.

The Collector recommends an immediate increase to the Establishment to the extent of 780 Rupees per annum, and in case a new Platform be sanctioned at Nowpadah, a further increase of 552 Rupees per annum.

VIZAGAPATAM.

The Salt Establishment of Vizagapatam is small, consisting of 1 Goomastah at the Hoozoor on 15 Rs. a month, and 4 Thanadars, 3 Peishcars, 1 Muddutgar, 4 Shroffs, 2 Golahs, 2 Duffadars, 32 Peons and 7 Doorgapooloos. Their duties are as follows. The Goomastah keeps the accounts received from the district, under the supervision of the Revenue Head Sheristadar. The Thanadars conduct the details of the Depôts to which they are attached, under instructions from the Hoozoor. The Peishcars and Muddutgars are employed in keeping the accounts of salt transactions under the orders of the Thanadar, and otherwise assist him. The Shroffs keep accounts of actual Receipts and Disbursements, and are also employed in shroffing or testing the money received. The Golahs, Duffadars and Peons, are employed at the discretion of the Thanadar, to look after the manufacturing and storing of Salt and protecting the commodity from being stolen. The Doorgapooloos or Measurers are employed in receiving salt into store and measuring it for sale. All the above duties are conducted under the general superintendence of the Collector and two of his Assistants. There are no Uncovenanted Assistants in this Department in Vizagapatam.

RAJAHMUNDRY.

The Salt Department in Rajahmundry is under the control of the Collector, but is generally handed over to his Head Assistant. The Hoozoor Establishment is employed in conducting the correspondence and examining the accounts under the orders of the Head Assistant Collector. At each Cotaur there is a Superintendent styled Darogah, who is charged with the general supervision of the Cotaur, with the manufacture, receipt and sale of salt, prevention of smuggling, preparation of accounts, &c. He is assisted by a Peishcar and two or more Accountants or Muddutgars. The Karodah was appointed in order that there might be some check on the Darogah, his duty is to be always present at the sales, and to report direct to the Head Assistant Collector when any irregularity comes to his knowledge. This office having been found useless in practice, the Collector has recommended its abolition. The Shroff is responsible for the genuineness of all the coin tendered in exchange for salt, and for the custody of the money when first received at the time of sale. The Pygusties or Head Peons, are distributed among the different platforms, and have the other Peons under their orders. The Daloyets are employed in attending the Darogah, and in guarding the Cash Chest. The Taliars are the Measurers of the Salt. The Hungamah or temporary Peons are employed in the

manufacturing season to watch the pans and to prevent smuggling. A portion of them is afterwards retained to assist in guarding the Platforms. They are discharged, gradually, as the salt on the Platforms is sold off, and their services can be dispensed with.

ESTABLISHMENT.

Hoozoor.

No.	Denomination.	Amount of salary per mensem.
		Rs.
1	Salt Gentoo Accountant,	30
1	Do. Writer,	25
		55

GYBUT.

Pittapoor.

No.	Denomination.	Amount of Monthly salary.
		Rs.
1	Darogah,	60
1	Peishcar,	25
1	Head Muddutgar,	12
1	Second do.	10
1	Poorookoo Goomastah,	8
1	Karodah,	10
1	Shroff,	10
4	Daloyets at 5 Rupees each,	20
8	Pygusties at 5 Rupees each,	40
16	Peons at 4 Rupees each,	64
1	Musaljee,	2
8	Taliaries at 3 Rupees each,	24
	Hungamah Peons from 100 to 150, 4 to 6 months at 4 Rupees each per mensem.	

Moghultoor.

No.	Denomination.	Amount of Monthly salary.
		Rs.
1	Darogah,	50
1	Peishcar,	25
1	Head Muddutgar,	12
1	Second do.	8
1	Karodah,	10
1	Shroff,	10
3	Daloyets at 5 Rupees each,	15
8	Pygusties at 5 Rupees each,	40
18	Peons at 4 Rupees each,	72
8	Taliaries, 2 at $3\frac{1}{2}$ Rupees each, and 6 at 3 Rupees each,	25
	Hungamah Peons, probably 30, for about 4 months at 4 Rupees each per month.	

Masulipatam.

The Salt Cotaurs of Masulipatam have usually been placed under the immediate supervision of the Head or Junior Assistant Collector, subject to the control of the Collector, who himself visits them when occasion may arise, or when, in the course of his duty, it may be practicable. The Hoozoor Cutcherry accounts of the Salt department are subject to the supervision of the Head Sheristadar, who has the duty of checking the accounts.

ESTABLISHMENT.

Rank or Employment.	Inoogoodoor Cotaur.				Pandrakah Cotaur.				Total.				Remarks.
	Number.	Salary per Month.			Number.	Salary per Month.			Number.	Salary per Month.			
		Rs.	A.	P.		Rs.	A.	P.		Rs.	A.	P.	
Ameens	1	30	0	0	1	60	0	0	2	90	0	0	Superintend the manufacture, gathering, and sale of the Salt, and are entrusted with the entire management of the Cotaur.
Peishcars	1	14	0	0	1	14	0	0	2	28	0	0	Aid the Ameens in storing and selling the Salt, and check the accounts of the Cotaurs.
Muddutgars	0	0	0	0	1	10	0	0	1	10	0	0	Prepare the daily, monthly, and other accounts, and also are occasionally sent to the Platforms for petty sales.
					1	7	0	0	1	7	0	0	
Karodahs	1	10	0	0	1	10	0	0	2	20	0	0	Go rounds to the platforms, and watch during the manufacture and storing of the Salt.
Shroffs	1	6	0	0	1	7	0	0	2	13	0	0	In charge of the Treasury under the orders of the Ameens.
Duffadars	1	6	0	0	1	6	0	0	2	12	0	0	Attend at the Treasury, and inspect the pans during the manufacture of the Salt under the orders of the Ameens.
Kautagurs, at Rs. 5 each	2	10	0	0	4	20	0	0	6	30	0	0	Measure the Salt at the time of storing and selling it.
Daloyets, at Rs. 5 each	2	10	0	0	5	25	0	0	7	35	0	0	Guard the Treasury.
Pygusties, at Rs. 4-8 each	3	13	8	0	6	27	0	0	9	40	8	0	Vide remark against Karodas.
Fixed peons, at Rs. 4 each	12	48	0	0	20	80	0	0	32	128	0	0	Watch the Platforms.
Hungamah, do. at Rs. 4 each	0	0	0	0	20	80	0	0	20	80	0	0	Do. do.
Sweepers	1	1	8	0	1	1	0	0	2	2	8	0	Serve under orders of the Ameens for cleaning the Cutcherry, &c.
Total	25	149	0	0	63	347	0	0	88	496	0	0	
Saderwared	0	2	10	0	0	3	4	0	0	5	14	0	
Total	25	151	10	0	63	350	4	0	88	501	14	0	
Hoozoor.													
Peishcar									1	17	8	0	Examine and prepare the Salt accounts in the Huzzoor, under the orders of the Head Sheristadar.
Goomastah									1	7	0	0	
Total									2	24	8	0	
Grand Total									90	526	6	0	

GUNTOOR. In Guntoor there is no Covenanted Servant specially employed in the Salt Department. The details, however, are conducted by one of the Covenanted Assistants under the general superintendence and supervision of the Collector.

ESTABLISHMENT.

Number.	Name of Division.	Name of Store.	No. in Column of Remarks.	Employment.	No. of Servants.	Salary of each per mensem.			Total.			Grand Total.		
1	Chinna Ganjam...........	Chinna Ganjam........	1	Thannadar, ...	1	60	0	0	60	0	0			
			2	Peishcar, ...	1	25	0	0	25	0	0			
			3	Muddutgar, ...	1	10	0	0	10	0	0			
			4	Nevesindahs, ...	3	10	0	0	30	0	0			
			5	Measurers, ...	1	7	0	0	7	0	0			
					1	5	0	0	5	0	0			
			6	Shroffs, ...	1	14	0	0	19	0	0			
					1	5	0	0						
			7	Superintending Duffadars, ...	2	15	0	0	30	0	0			
			8	Duffadar of Peons, ...	1	8	0	0	8	0	0			
			9	Peons, ...	36	5	0	0	180	0	0			
			10	Musaljee, ...	1	3	0	0	3	0	0			
			11	Carriers of Mercals, ...	2	2	8	0	5	0	0			
				Saderwared, ...	0	0	0	0	10	8	0	392	8	0
		Pedda Ganjam..........	12	Goomastah, ...	1	15	0	0	15	0	0			
				Nevesindah, ...	1	10	0	0	10	0	0			
				Shroff, ...	1	5	0	0	5	0	0			
				Measurer, ...	1	5	0	0	5	0	0			
				Superintending Duffadar, ...	1	15	0	0	15	0	0			
				Peons, ...	6	5	0	0	30	0	0			
			13	Salt Cutters, ...	2	5	0	0	10	0	0			
				Carriers of Mercals, ...	2	0	14	0	1	12	0			
				Saderwared,...	0	0	0	0	2	4	0			
				Sweeper, ...	0	0	0	0	0	4	0	94	4	0
2	Nizampatam..................	Nizampatam	14	Thannadar, ...	1	40	0	0	40	0	0			
				Peishcar, ...	1	20	0	0	20	0	0			
				Muddutgar, ...	1	10	0	0	10	0	0			
				Shroff, ...	1	7	0	0	7	0	0			
				Measurer, ...	1	5	0	0	5	0	0			
				Superintending Duffadar, ...	1	15	0	0	15	0	0			
				Duffadar, ...	1	7	0	0	7	0	0			
				Peons, ...	14	5	0	0	70	0	0			
				Salt Cutters, ...	3	2	8	0	7	8	0			
				Carriers of Mercals, ...	2	0	14	0	1	12	0			
				Saderwared, ...	0	0	0	0	4	0	0	187	4	0
		Pairly	15	Goomastah, ...	1	20	0	0	20	0	0			
				Nevesindah, ...	1	10	0	0	10	0	0			
				Shroff, ...	1	7	0	0	7	0	0			
				Measurer, ...	1	5	0	0	5	0	0			
				Superintending Duffadar, ...	1	15	0	0	15	0	0			
				Peons, ...	8	5	0	0	40	0	0			
				Salt Cutters, ...	2	2	8	0	5	0	0			
				Carriers of Mercals, ...	2	0	14	0	1	12	0			
				Saderwared, ...	0	0	0	0	2	0	0	105	12	0
			16	Pay of Boatman employed at Nizampatam, ...								1	4	0
			17	Pay of Water Pandal Bramin at Chinna Ganjam, ...								3	0	0
												784	0	0
	ESTABLISHMENT IN COLLECTOR'S OFFICE.													
	Sheristah Department..........................		18	Muddutgar, ...	1	30	0	0	30	0	0			
			19	Goomastah, ...	1	21	0	0	21	0	0			
	Moonshee's do.		20	Jawabnevis, ...	1	28	0	0	28	0	0			
	Accountant's do.		21	English Writer, ...	1	30	0	0	30	0	0	109	0	0
									Total C. Rupees...			893	0	0

REMARKS.

No. 1. The Thannadar resides at Chinna Ganjam, the larger of the two Depôts under his superintendance. He visits Pedda Ganjam periodically, and generally on any occasion when his presence at that place is required. He is responsible both for the Cash and the Salt in store, and for the correctness of all the accounts—when the quantity of Salt to be made for the year is determined by the Collector, he apportions the total quantity to be made on each manufacturer according to the number of his pans. It is his duty to watch the progress of the manufacture, to take care that no Salt of an inferior quality is drawn from the pans, or that a larger quantity of Salt is not made than has been sanctioned, and generally to keep all the Establishment under his orders to their duty. He also exercises the authority of Head of District Police over four villages in the immediate vicinity of the Depôts.

„ 2. The Peishcar is principally employed in the preparation of the accounts transmitted daily, bi-monthly, and monthly to the Collector's Office, in which he is assisted by No. 3 the Muddutgar. In the absence of the Thannadar, the charge of that Officer's duties devolves on the Peishcar.

„ 4. One or more of these Officers attend daily at the Salt Platforms and superintend the measurement and delivery of the Salt to purchasers, keeping detailed accounts of the same. They are also employed in looking after and keeping the accounts connected with the repairs annually required to the platforms, roads and bridges in the vicinity of the stores. A portion of the time of one of them is taken up in the details of Police duties under the Thannadar. When the Salt is received into store, they are employed to watch the process and keep the accounts.

„ 5. Strike the measure during the time of retail sales and keep the tally.

„ 6. The duty performed by the Shroffs hardly requires explanation—they are jointly, with the Thannadar, responsible for the Cash.

„ 7. These servants, called in other Districts, Akbarnevis, &c., are not under the orders of the Thannadar or other Salt servants, their duty is generally to report direct to the European authorities all that may go on at the Salt stores to which they are attached, and especially to bring at once to notice any irregularities that may take place. They attend the daily sales and watch the progress of the manufacture. They also are required to see that any Salt spontaneously produced is at once destroyed. At the Chinna Ganjam Depôt there are thirteen platforms with a range of pans under each. One Duffadar has seven platforms, with the pans attached, to look after, and the other, the remaining six.

„ 8. Attends generally at the Salt Cutcherry, and details, under the orders of the Thannadar, the Peons to their different duties, &c.

„ 9. Of the 36 Peons, 26 are employed in watching the Salt on the thirteen platforms (two peons on each) and of the remaining ten, two are employed as Pygusties, who act as Overseers, and take care, that the platform peons are vigilant. Three at Pedda Ganjam, where the number of peons is insufficient for the work required, and five in the ordinary and general duties of the Cutcherry.

„ 10. Trims the lamps and sweeps the Cutcherry.

„ 11. Are employed in carrying daily the mercals, used for measuring the Salt, from the Cutcherry to the platforms—where the sales are going on and back.

„ 12. This Officer has immediate charge of the Pedda Ganjam store, but in subordination to the Thannadar of Chinna Ganjam.
Except the Salt Cutters, (No. 13), as they are called, who are employed in breaking up the Salt heaps and in filling the measures at the time
of sale, the duties of the other servants have been already detailed at Chinna Ganjam. Coolies are employed, as occasion requires, in
breaking up the Salt and filling the measure.

„ 14. The Nizampatam Thannadar exercises also a general superintendance over the Pairly store. His duties, connected with the Salt, as
well as those of all the other servants under him, are precisely similar as at Ganjam. He is the Sea Custom Officer for the Ports of Ni-
zampatam and Cottapalem, but the duties are not very onerous, and he has the aid of his subordinates when necessary. He also exercises
the powers of Head of District Police in four villages. Of the 14 peons at Nizampatam, 10 are employed in guarding the five platforms,
one as a Pygusty, and the remainder on ordinary duties. There are two platforms at Pairly on which 4 of the 8 peons are employed,
another acts as a Pygusty, and the remaining 3 are employed in ordinary Cutcherry duties, either at Nizampatam or Pairly as their
services may be required.

„ 15. The Pairly store is a very small one, but as it is some distance (about eight miles) from Nizampatam, the Goomastah in charge is considered to have a larger degree of responsibility than the Officer holding the similar situation at Pedda Ganjam. There is no doubt, however, that this latter Officer ought to get at least 20 Rupees salary, a recommendation to this effect has lately been made to the Commissioner.

„ 16. This Boatman is employed in crossing the tappals, public servants, &c. over a small salt-water channel between the town of Nizampatam and the Salt platforms and pans.

„ 17. This man supplies water to the servants and others employed on the Salt platforms during the sales and at the time of storing.

„ 18. and 19. The duty of these servants is to examine all accounts received from the Thannadars, and to prepare in the vernacular, those required for submission to the controlling authorities.

„ 20. Reads to the Covenanted Officer the communications from the Thannadars, receives his orders and transcribes the replies, &c.

„ 21. Prepares in English the accounts required for submission to the controlling authorities.

NOTE.—The duties detailed above as devolving on the servants on the Collector's Office, Nos. 18, 19 and 20, are those for the performance of which they are required, but as there is no separate establishment in the Collector's Office for the Covenanted Assistants, it is often necessary in arranging a suitable establishment for each, to employ these servants on the ordinary duties of the Collector's Office, other servants of the same Office performing those connected with the Salt Department.

NELLORE. There is no separate Covenanted or Uncovenanted Agency in Nellore. The Department is under the control of the Collector.

ESTABLISHMENT.

	No.	Divisions.	No.	Cotaurs.	Superintendents. No.	Superintendents. Rs.	A.	P.	Goomastahs. No.	Goomastahs. Rs.	A.	P.	Nevesindahs. No.	Nevesindahs. Rs.	A.	P.	Shroffs. No.	Shroffs. Rs.	A.	P.	Ackberniviss. No.	Ackberniviss. Rs.	A.	P.	Naicks. No.	Naicks. Rs.	A.	P.	Pygusties. No.	Pygusties. Rs.	A.	P.	Peons. No.	Peons. Rs.	A.	P.	Vettyans. No.	Vettyans. Rs.	A.	P.	Total. No.	Total. Rs.	A.	P.
Gybut Servants.	1	Panderty	1	Panderty	1	40	0	0	1	25	0	0	2	34	0	0	2	21	0	0	1	12	0	0	1	6	0	0	1	6	0	0	18	90	0	0	2	7	0	0	0	241	0	0
			2	Alloor	0	0	0	0	1	20	0	0	1	15	0	0	0	0	0	0	1	12	0	0	0	0	0	0	1	6	0	0	5	25	0	0	2	7	0	0	0	85	0	0
			3	Camoopurty	0	0	0	0	1	20	0	0	1	15	0	0	1	7	0	0	1	12	0	0	0	0	0	0	1	6	0	0	13	65	0	0	2	7	0	0	0	132	0	0
			4	Davarumpaud	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	5	25	0	0	2	6	0	0	0	37	0	0
	2	Paukala	1	Paukala	1	30	0	0	1	20	0	0	2	28	0	0	2	17	0	0	1	12	0	0	1	6	0	0	1	6	0	0	17	85	0	0	2	6	0	0	0	210	0	0
			2	Binginapully																																								
	3	Eskapully	1	Eskapully	1	40	0	0	1	20	0	0	1	15	0	0	1	10	0	0	1	12	0	0	1	6	0	0	1	6	0	0	20	100	0	0	5	15	0	0	0	224	0	0
			2	Gogoolapully	0	0	0	0	1	20	0	0	1	15	0	0	1	7	0	0	1	12	0	0	0	0	0	0	1	6	0	0	14	70	0	0	2	6	0	0	0	136	0	0
			3	Joovuldinna	0	0	0	0	1	20	0	0	1	15	0	0	1	7	0	0	2	17	0	0	0	0	0	0	1	6	0	0	8	40	0	0	2	6	0	0	0	111	0	0
			4	Toomalapenta	0	0	0	0	1	20	0	0	1	15	0	0	1	7	0	0	0	0	0	0	0	0	0	0	1	6	0	0	8	40	0	0	2	6	0	0	0	94	0	0
	4	Kristnapatam	1	Krisnapatam	1	30	0	0	1	20	0	0	1	15	0	0	1	7	0	0	1	12	0	0	1	6	0	0	1	6	0	0	17	85	0	0	2	6	0	0	0	187	0	0
			2	Gungapatam	0	0	0	0	1	20	0	0	1	10	0	0	1	7	0	0	1	10	0	0	0	0	0	0	1	6	0	0	7	35	0	0	2	6	0	0	0	94	0	0
	5	Doogoorauzpatam	1	Cottapatam	1	30	0	0	0	0	0	0	3	44	0	0	3	21	0	0	1	12	0	0	1	6	0	0	2	12	0	0	17	85	0	0	4	8	0	0	0	218	0	0
			2	Toopely																																								
			3	Doogoorauzpatam																																								
			4	Mullaum																																								
	6	Tadah	1	Tadah	1	40	0	0	0	0	0	0	2	32	0	0	2	15	0	0	1	12	0	0	1	6	0	0	1	6	0	0	15	75	0	0	2	4	0	0	0	190	0	0
			2	Poody	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	10	0	0	1	2	0	0	0	12	0	0
			3	Raumapooram	0	0	0	0	0	0	0	0	1	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	3	15	0	0	1	2	0	0	0	38	0	0
			4	Vadookaudoo	0	0	0	0	0	0	0	0	1	15	0	0	1	7	0	0	1	10	0	0	0	0	0	0	1	6	0	0	6	30	0	0	2	4	0	0	0	72	0	0
				Total Gybut	6	210	0	0	10	205	0	0	19	283	0	0	17	133	0	0	13	145	0	0	6	36	0	0	16	96	0	0	175	875	0	0	35	98	0	0	297	2,081	0	0
Hoozoor Servants			1	Salt Writer	0	50	0	0																																				
			1	Head Goomastah	0	30	0	0																																				
			1	Goomastah	0	25	0	0																																				
			1	Javabniviss	0	25	0	0																																				
			1	Rowanah Writer	0	15	0	0																																				
			1	Ink-maker	0	7	0	0																																				
			1	Musaljee	0	5	0	0																																				
						157	0	0																																				

DUTIES OF EACH CLASS OF SERVANTS.

Gybut Servants.	Superintendent ..	The management of the Divisions consisting of from 2 to 4 Cotaurs is under the Superintendents, who have to superintend the manufacture, storing and sale of Salt, and to send reports and accounts to the Collector's Office, and receive instructions from there.
	Goomastah ..... Nevesindah	These servants have to superintend the manufacture, storing and sale of the Salt in a Cotaur, and prepare the accounts.
	Shroff	It is his duty to receive the money from the purchasers of Salt, examine coins, and keep regular accounts of the same.
	Akbernevis......	His duty is to watch the conduct of all the other servants, and bring any irregularities or particular circumstances to the notice of the Collector, and to stand by when the sales are going on to see that the measurements are correctly made.
	Naick	To overlook the Peons and see to the due performance of their duties.
	Pygusties.	To see that there is no smuggling, and that the Peons are on their watch, and go their rounds during night and day.
	Peons	Some to be on the Platforms watching the Salt, some at the Pans, and some for guarding the Cash, and the remainder to perform the other miscellaneous duties required.
	Vettymen......	Engaged in the weighing and measuring of Salt, and to make any slight repairs on the Platforms, and perform other trifling duties.
Hoozoor Servants.	Salt Writer	To prepare the English accounts, and copy letters required to be sent to the Board of Revenue.
	Head Goomastah.	To prepare, in Teloogoo, all the accounts, &c., required.
	Goomastah.	To examine the various accounts sent in by the Superintendents, and to bring any discrepancies in them to notice.
	Rowanah Writer.	To number the Rowanahs received from Madras, and send them to the Cotaurs as per Indents received from them.
	Ruktawan	To make the Indian ink for writing the accounts, and to stamp the Rowanah accounts, &c.
	Musaljee	To keep lights.
	Javabnevis.	To register the Urzees sent by the Superintendents and the Cotaur servants, and to draft the necessary orders. Deputed to perform Salt duties in the Sub-Collector's Office.

These servants are not all confined to these specific duties, but some of them are employed on the general business of the Collector's Office.

CHINGLEPUT.

No portion of the Covenanted Service, or of the Hoozoor Native Establishment, is exclusively assigned to the Salt Department.

ESTABLISHMENT.

		Particulars of Establishment.																											
		Peishcars.				*Nevisindahs.*				*Shroffs.*				*Duffadars.*				*Peons.*				*Measurers.*				*Total.*			
		No.	Monthly Pay.			No.	Monthly Pay			No.	Monthly Pay.			No.	Monthly Pay.			No.	Monthly Pay.			No.	Monthly Pay.			No.	Monthly Pay.		
			Rs.	A.	P.		Rs.	A.	P.		Rs.	A.	P.		Rs.	A.	P.		Rs.	A.	P.		Rs.	A.	P.		Rs.	A.	P.
1	Chunambut,........	1	28	0	0	1	10	0	0	1	10	0	0	1	7	0	0	14	56	8	0	2	8	8	0	20	120	0	0
2	Cheyoor,............	1	28	0	0	1	10	0	0	1	10	0	0	1	7	0	0	21	84	0	0	2	8	8	0	27	147	8	0
3	Pyennoor, &c........	1	28	0	0	2	20	0	0	1	10	0	0	1	7	0	0	15	60	0	0	2	8	8	0	22	133	8	0
4	Covelong............	1	35	0	0	2	20	0	0	1	10	0	0	1	7	0	0	14	56	0	0	0	0	0	0	19	128	0	0
5	Vadaseminjary,.....	1	28	0	0	1	10	0	0	1	10	0	0	1	7	0	0	8	32	0	0	1	5	0	0	13	92	0	0
6	Chunamboocolum,.	1	28	0	0	2	20	0	0	1	10	0	0	1	7	0	0	12	48	0	0	2	8	8	0	19	121	8	0
7	Poongalum,..........	1	25	0	0	2	16	0	0	1	5	0	0	0	0	0	0	8	28	0	0	1	4	0	0	13	78	8	0
	Total...	7	200	0	0	11	106	0	0	7	65	0	0	6	42	0	0	92	364	8	0	10	43	0	0	133	821	0	0

The Peishcar superintends all the transactions connected with the arrangement for the manufacture, the receipt and sale of Salt, and the prevention of theft or smuggling at the Pans, and furnishes the various accounts connected with them to the Collector's Office. He is also entrusted with the Police charge of the Station and a distance of 3 miles around. The Nevisindah prepares the accounts above referred to, and assists the Peishcar in his various duties. The Shroff is the Treasurer of the Salt collections, and likewise assists the Nevisindah. The Duffadar and Peons watch over the Pans during the period of manufacture, in view to the prevention of smuggling, they also protect the Salt Depôt and the Treasury, and form the Police within the Pieshcar's charge. The Measurers are employed in measuring the Salt on its receipt and sale.

South Arcot. It has been usual in South Arcot for the Collector to take the aid of one of his Covenanted Assistants, generally the Head Assistant Collector, in managing the Salt Department.

ESTABLISHMENT.

No.	Items.	Mercanum. No.	Mercanum. Salary per Month. Rs.	A.	P.	Teagavelly. No.	Teagavelly. Salary per Month. Rs.	A.	P.	Killay. No.	Killay. Salary per Month. Rs.	A.	P.	Cuddalore. No.	Cuddalore. Salary per Month. Rs.	A.	P.	Total. No.	Total. Salary per Month. Rs.	A.	P.
1	Ameen......	1	70	0	0	1	17	8	0	1	14	0	0	1	10	8	0	4	112	0	0
2	Mooshruff.....	2	22	12	0	1	10	8	0	0	0	0	0	0	0	0	0	3	33	4	0
3	Nevisindah.....	1	7	0	0	0	0	0	0	1	7	0	0	2	12	4	0	4	26	4	0
4	Shroff....	2	14	0	0	1	3	8	0	1	3	8	0	0	0	0	0	4	21	0	0
5	Salt Measurers and Toties..	7	13	8	0	0	0	0	0	1	8	0	0	4	13	2	0	12	29	10	0
6	Duffadar..	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	0	0
7	Pygusties..	4	18	8	0	3	12	0	0	2	7	0	0	4	15	8	0	13	53	0	0
8	Peons....	21	89	8	0	7	28	0	0	7	28	0	0	7	25	8	0	42	171	0	0
9	Tookrey....	6	15	8	0	0	0	0	0	1	3	0	0	4	14	0	0	11	32	8	0
10	Ungasalay or Salt Watchers.	5	9	8	0	0	0	0	0	0	0	0	0	0	0	0	0	5	9	8	0
11	Musaljee....	1	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	8	0
12	Sweeper...	1	3	8	0	0	0	4	0	0	0	0	0	0	0	0	0	2	3	12	0
	Total....	52	274	4	0	14	71	12	0	14	65	8	0	22	90	14	0	102	502	6	0
	Roossoomdars.																				
13	Monigar.	9	13	0	2	0	0	0	0	0	0	0	0	0	0	0	0	9	13	0	2
14	Curnum...	7	10	13	9	0	0	0	0	3	0	10	5	0	0	0	0	10	11	8	2
15	Nothagar...	2	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	2	0	5	5
16	Multum Durmacurtah.	0	0	0	0	1	2	13	1	0	0	0	0	0	0	0	0	1	2	13	1
17	Boatman....	0	0	0	0	1	0	14	0	0	0	0	0	0	0	0	0	1	0	14	0
18	Pundarum....	0	0	0	0	1	0	13	11	0	0	0	0	0	0	0	0	1	0	13	11
19	Carpenter and Iron Smith.....	0	0	0	0	1	0	6	9	0	0	0	0	0	0	0	0	1	0	6	9
20	Water Pandal.	0	0	0	0	0	0	0	0	3	0	7	8	0	0	0	0	3	0	7	8
	Total...	18	24	3	4	4	4	15	9	6	1	2	1	0	0	0	0	28	30	5	2
	Grand Total per Month.	70	298	7	4	18	76	11	9	20	66	10	1	22	90	14	0	130	532	11	2
	Do. per Annum.	0	3,581	8	0	0	820	13	0	0	799	9	0	0	1,090	8	0	0	6,392	6	0

REMARKS.

No. 1. Has general control over the Depôt and its servants, and is the responsible Officer for all its affairs, from superintending the manufacture of Salt to its eventual sale, and the remittance of the proceeds at fixed intervals to the Hoozoor Treasury.

No. 2.—Are ministerial servants under the Ameen, to assist him in the above duties and in keeping the Depôt Accounts.

No. 3.—Same as Mooshruff, but the name implies that his more particular duty is to write the accounts, Rowanahs, and the Ameen's reports to the Hoozoor.

No. 4.—Examines the Coins received from parties who purchase Salt, has part-charge of the Cash Chest, and accompanies the remittances to the Hoozoor.

No. 5.—They measure the Salt when received from the Manufacturers, and afterwards when sold to Merchants, &c.

No. 6.—Has charge over the Peons employed at the Depôt, guards the Cash Chest, and escorts the remittances to the Hoozoor.

Nos. 7, 8, 9, and 10.—Keep general guard over the Pans and Plat-forms night and day, to prevent thefts and smuggling. Besides the above office, the Peons have general duties in the Ameen's Cutcherry, and in guarding the Cash Chest and remittances.

Nos. 13 to 20—These are the former hereditary servants at the pans, but who now receive money payment in lieu of their former privileges; they assist the Ameen occasionally, but have no longer any regular duties, and are pensioners rather than servants.

TANJORE.

In each Salt Division of Tanjore there are the following classes of officers—Pieshcar, Monigar, Sumpretty, Curnum, Taragen, and Peon. The manufacture is conducted by the Meerasidars or their laborers. The Head Native Officer over the whole Department is the Amildar, and the Head Assistant Collector is generally the Covenanted European Officer who has charge of it. Attached to his office are Goomastahs or Accountants. The Covenanted Officer's duty is, as the delegate of the Collector, to carry out the orders of Government and the Board of Revenue, and to prevent breaches of the Salt laws; to exercise a general control over every part of the Department; to give orders for the preparation of the Pans for the commencement of manufacture; for the mode in which the Officers superintending it are to be distributed; for the manner in which the Meerasidars are to be made to store the manufactured Salt provisionally, (previous to its delivery into Government store;) for the mode of storing in the Government Store; the process of measuring at the time of sale; and, in short, for all the other minutiæ connected with the Salt Department. By personally visiting the pans and stores; by measuring heaps; by comparing accounts; and by sifting information received; he has to see that the orders have been attended to; he also corresponds with the Collector upon points which he thinks require to be brought to the notice of that Officer, or of the Board of Revenue. The duties of the Amildar are to advise the Covenanted Officer upon every point on which his opinion may be required; to exercise a general control over the accounts of the Department; to prepare and submit them to the Collector; to assist the Covenanted Officer with information; and, when that officer is unable himself to visit the pans, to proceed there in his stead, and act under his directions. The Goomastahs of the Office are engaged in reading reports, in writing orders, and in keeping accounts. The Pieshcar of each Division acts under the orders of the Head Assistant Collector, and superintends his establishment of Monigar, Curnum, Sumpretties, Peons and Taragens. He is responsible for the accuracy of the accounts that issue from his Office, and the punctuality with which they are sent. He has to move about to the several pans within his division, to see that all orders are carried out, to conduct the manufacture, store and sale of Salt with regularity, and to remit the collections every ten days to the talook. The Monigar is the chief executive Officer of the division, it is his business to carry out the orders of the Peishcar, he has certain pans allotted him in which he superintends the manufacture and storing, and is always present at the sale of Salt when the Peishcar comes to his pans for the purpose. The Sumpretties are Ministerial Officers engaged in preparing accounts and assisting the Peishcar generally, the principal of these accounts are forwarded to the Head Assistant's Office every five days, and they specify every item of sale. There are also Wattamaray or ten

days accounts, Masadrum, or monthly accounts, and also the yearly accounts; but the Cooroopoo account is the fullest. The Curnums write up the rough and fair Cooroopoo and Modipumalai, assist at the manufacture, storing, and sale of Salt, and aid the Monigar at the pans and platforms. The duty of the Shroff is to receive money, to grant receipts, to take charge of the Treasury, and proceed with the remittance every ten days. The Taragen strikes the mercals when filled, and must always attend at the storing and sale of Salt. The Peons have to guard the Salt stores day and night, to prevent, and bring to notice, fraud and theft, and to apprehend offenders at the time of manufacture, storing and sale; to proceed with the remittances, and carry the post to the Talook Cutcherry.

Salt Moyenzabitah.

Office.	Monthly pay. Rs.	A.
HUZZOOR.		
Amildar,	100	0
Javabnevis,	21	0
Writer,	21	0
Head Goomastah,	21	0
2 Goomastahs at 10½ Rupees each,	21	0
4 Deloyets at 5 Rupees each,	20	0
	204	0
ARSANAGHERRY DIVISION CUTCHERRY		
Pieshcar,	21	0
Sumpretty,	7	0
Shroff,	5	4
Cutcherry Peon,	3	8
Do.	3	8
Do.	3	8
Gootty Peon,	4	0
Do.	4	0
Do.	4	0
Do.	4	0
Jadmalay,	1	8
CUSBAH ARSANAGHERRY PANS.		
Manium,	10	8
Curnum,	5	4
Peon,	3	8
Do.	3	8
Do.	3	8
Do.	3	8
Taragoo,	2	8
AYAPATAM PANS.		
Manium,	10	8
Curnum,	5	4
Peon,	3	8
Do.	3	8
Do.	3	8
Taragoo,	2	8
MOONPALLAY PANS.		
Peon,	3	8
Do.	3	8
Do.	3	8
	132	12
SENDALAY DIVISION CUTCHERRY.		
Peishcar,	21	0
Sumpretty,	7	0
Do.	7	0
Shroff,	5	4

Office.	Monthly pay. Rs.	A.
Cutcherry Peon,	3	8
Do.	3	8
Do.	3	8
Gootty Peon,	4	0
Do.	4	0
Do.	4	0
Do.	4	0
Jadmalay,	1	8
Cusbah Pans.		
Manium,	10	8
Curnum,	7	0
Peon,	3	8
Do.	3	8
Do.	3	8
Taragoo,	2	8
Coorooken Pans.		
Manium,	10	8
Curnum,	5	4
Peon,	3	8
Do.	3	8
Do.	3	8
Taragoo,	2	8
Cuttoomavady Pans.		
Manium,	10	8
Curnum,	5	4
Peon,	3	8
Do.	3	8
Do.	3	8
Do.	3	8
Do.	3	8
Taragoo,	2	8
Somanadenpettah Pans.		
Peon,	3	8
Do.	3	8
Nadiem Pans.		
Peon,	3	8
	173	12
Adrampatam Division Cutcherry.		
Pieshcar,	28	0
Sumpretty,	7	0
Do.	7	0
Shroff,	7	0
Cutcherry Peon,	3	8
Do.	3	8
Do.	3	8
Gootty Peon,	4	0
Gootty Peon,	4	0
Do.	4	0
Do.	4	0
Jadmalay,	1	8
Cusbah Pans.		
Manium,	10	8
Curnum,	5	4
Peon,	3	8
Do.	3	8
Do.	3	8
Do.	3	8
Do.	3	8
Taragoo,	2	8
Tamarencottah Pans.		
Manium,	10	8
Curnum,	5	4
Peon,	3	8
Do.	3	8
Do.	3	8
Taragoo,	2	8
Tumbickenellevencottah Pans.		
Manium	10	8
Curnum,	7	0
Peon,	3	8
Do.	3	8
Do.	3	8
Do.	3	8
Do.	3	8
Taragoo,	2	8
Machelencottah Pans.		
Manium,	10	8
Curnum,	5	4
Peon,	3	8
Do.	3	8
Do.	3	8
Taragoo,	2	8
	207	12
Neidvassel Division Cutcherry.		
Peishcar,	28	0
Sumpretty,	7	0
Do.	7	0
Shroff,	7	0
Peon,	3	8
Do.	3	8
Gootty Peon	4	0
Do.	4	0
Do.	4	0
Do,	4	0
Jadmalay,	1	8

Office.	Monthly Pay. Rs.	A.
Cusbah Pans.		
Manium,	10	8
Curnum,	5	4
Do.	5	4
Peon,	3	8
Do.	3	8
Do.	3	8
Tenpady Peon,	3	8
Do.	3	8
Do.	3	8
Keelivoor Peon,	3	8
Do.	3	8
Do.	3	8
Taragoo,	2	8
Kadacaud Pans.		
Manium,	10	8
Curnum,	5	4
Peon,	3	8
Do.	3	8
Do.	3	8
Tunnumpatam Peon,	3	8
Do.	3	8
Do.	3	8
Taragoo,	2	8
Valadalacoody Pans.		
Manium,	10	8
Curnum,	5	4
Peon,	3	8
Do.	3	8
Do.	3	8
Taragoo,	2	8
	106	8

Office.	Monthly Pay. Rs.	A.
Gootty Peon,	3	8
Do.	3	8
Do.	3	8
Jadmalay,	1	8
Cusbah Pans.		
Manium,	10	8
Curnum,	5	4
Do.	5	4
Poottoor Peon,	3	8
Do.	3	8
Ackerapoottoor Peon,	3	8
Do.	3	8
Andanampettah Peon,	3	8
Papacavil do.	3	8
Curtellengady do.	3	8
Pootoorvady do.	3	8
Do. do.	3	8
Taragoo,	2	8
Chendrapady Pans.		
Manium,	10	8
Curnum,	5	4
Peon,	3	8
Do.	3	8
Covilput Pans.		
Peon,	3	8
Taragoo,	2	8
Vadarniem Pans.		
Manium,	10	8
Curnum,	5	4
Peon,	3	8

Places.	Amildar. Number.	Amount of Monthly Pay. Rs.	A.
Hoozoor.	0	0	0
Head Cutcherry.....	1	120	0
Turagoody Pans. ...	0	0	0
Mookeyoor Do. ...	0	0	0
Moottooragoonadapatam. Do. ...	0	0	0
Valinokum Do. ...	0	0	0
Morekolum Do. ...	0	0	0
Authenkurray Do...	0	0	0
Vyravanadapatam Do.	0	0	0
Ooppoor Do. .	0	0	0
Ogandangoody Do. ...	0	0	0
Maunagoody Do. .	0	0	0
Sholeagoody Do. ...	0	0	0
Vuttanum Do. .	0	0	0
Kullianegery Do. ...	0	0	0
Theethandathanem Do. ...	0	0	0
Pumbarturavy Cavilgars...	0	0	0
Total...	1	120	0

No part of t

Moyenzabitah of the Salt Establishment of the District of Madura.

Places.	Amildar. Number.	Amildar. Amount of Monthly Pay. Rs.	A.	Pygust Ameen. Number.	Pay. Rs.	A.	Writer. Number.	Pay. Rs.	A.	Goomastah. Number.	Pay. Rs.	A.	Goomastah at 17½ Rs. each per Month. Number.	Pay. Rs.	A.	Do. at 14 Rs. Do. Number.	Pay. Rs.	A.	Do. at 10½ Rs. Do. Number.	Pay. Rs.	A.	Royasom at 21 Rs. each. Number.	Pay. Rs.	A.
Hoozoor.	0	0	0	0	0	0	1	28	0	1	21	0	2	35	0	0	0	0	0	0	0	1	21	0
Head Cutcherry.....	1	120	0	2	50	0	0	0	0	0	0	0	1	17	8	0	0	0	3	31	8	0	0	0
Turagoody Pans. ...	0	0	0	0	0	0	0	0	0	0	0	0	1	17	8	0	0	0	0	0	0	0	0	0
Mookeyoor Do. ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	14	0	0	0	0	0	0	0
Moottooragoonadapatam. Do. ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	14	0	0	0	0	0	0	0
Valinokum Do. ...	0	0	0	0	0	0	0	0	0	0	0	0	1	17	8	0	0	0	0	0	0	0	0	0
Morekolum Do. ...	0	0	0	0	0	0	0	0	0	0	0	0	1	17	8	0	0	0	0	0	0	0	0	0
Authenkurray Do...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	14	0	0	0	0	0	0	0
Vyravanadapatam Do.	0	0	0	0	0	0	0	0	0	0	0	0	1	17	8	0	0	0	0	0	0	0	0	0
Ooppoor Do. .	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	14	0	0	0	0	0	0	0
Ogandangoody Do. ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	14	0	0	0	0	0	0	0
Maunagoody Do. .	0	0	0	0	0	0	0	0	0	0	0	0	1	17	8	0	0	0	0	0	0	0	0	0
Sholeagoody Do. ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	14	0	0	0	0	0	0	0
Vuttanum Do. .	0	0	0	0	0	0	0	0	0	0	0	0	1	17	8	0	0	0	0	0	0	0	0	0
Kullianegery Do. ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	14	0	0	0	0	0	0	0
Theethandathanem Do. ...	0	0	0	0	0	0	0	0	0	0	0	0	1	17	8	0	0	0	0	0	0	0	0	0
Pumbarturavy Cavilgars...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total...	1	120	0	2	50	0	1	28	0	1	21	0	10	175	0	7	98	0	3	31	8	1	21	0

Places.	Do. at 7 Rs. Do. Number.	Pay. Rs.	A.	Assist-ant Royasom at 4 Rs. Do. Number.	Pay. Rs.	A.	Shroff. Number.	Pay. Rs.	A.	Gollah. Number.	Pay. Rs.	A.	Duffadar. Number.	Pay. Rs.	A.	Peons. Number.	Pay. Rs.	A.	Measurers. Number.	Pay. Rs.	A.	Musaljee and Sweeper. Number.	Pay. Rs.	A.	Total. Number.	Pay. Rs.	A.	Remarks.
Hoozoor.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	105	0	To read to the Collector, Urzees connected with Salt revenue, and to prepare Monthly, Quarterly, and Yearly Accounts for submission to the Board, &c.
Head Cutcherry.....	1	7	0	2	8	0	1	8	12	1	5	4	1	7	0	20	70	0	0	0	0	2	3	8	35	328	8	To superintend the Salt Revenue,—and this Establishment has control over the servants of the several Depôts.
Turagoody Pans. ...	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	8	28	0	1	3	0	0	0	0	11	55	8	To conduct the manufacture and sales of Salt subject to the control of the Head Cutcherry.
Mookeyoor Do. ...	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	5	17	8	1	3	0	0	0	0	8	41	8	
Moottooragoonadapatam. Do. ...	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	6	21	0	1	3	0	0	0	0	9	45	0	
Valinokum Do. ...	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	6	21	0	1	3	0	0	0	0	9	48	8	
Morekolum Do. ...	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	6	21	0	1	3	0	0	0	0	9	48	8	
Authenkurray Do...	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	6	21	0	1	3	0	0	0	0	9	45	0	
Vyravanadapatam Do.	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	6	21	0	1	3	0	0	0	0	9	48	8	
Ooppoor Do. .	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	5	17	8	1	3	0	0	0	0	8	41	8	
Ogandangoody Do. ...	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	6	21	0	1	3	0	0	0	0	9	45	0	
Maunagoody Do. .	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	8	28	0	1	3	0	0	0	0	11	55	8	
Sholeagoody Do. ...	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	5	17	8	1	3	0	0	0	0	8	41	8	
Vuttanum Do. .	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	8	28	0	1	3	0	0	0	0	11	55	8	
Kullianegery Do. ...	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	5	17	8	1	3	0	0	0	0	8	41	8	
Theethandathanem Do. ...	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	8	28	0	1	3	0	0	0	0	11	55	8	
Pumbarturavy Cavilgars...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	12	0	0	0	0	4	12	0	
Total...	1	7	0	2	8	0	15	106	12	1	5	4	1	7	0	108	378	0	18	54	0	2	3	8	174	1,114	0	

No part of the salary of the Collector and his Assistants is entered, because that would be exactly the same if there were no Salt.

Per Annum......13,368 0 0

TINNEVELLY.

There is no Covenanted Officer expressly for the Salt Department in Tinnevelly. The Head Assistant Collector has charge of the Department under the orders of the Collector.

ESTABLISHMENT.

		Rs.	A.
1	Salt Peishcar on a salary of 100 Rupees a month, who, under the Head Assistant Collector, has entire charge of this Department, but this Officer also acts as Sheristadar in the Head Assistant's Collector's Office, relieving the Head Sheristadar's Cutchery from all the details of the revenue business, and Sayer and Sea Customs, &c., under the same Officer,	100	0
1	Javabnevis on a salary of, - -	17	8
1	Writer „ „ - -	17	8
2	Tamil Goomastahs, one on 14 Rupees and the other on 10½ Rupees, respectively, - - - -	24	8
1	Hindoovie Goomastah at - - -	14	0
1	Peishcar Goomastah at - - -	10	0
2	Peons at 5 Rupees each, - -	10	0
	Total Rupees...	193	8
5	Chowkeydars on a salary of 21 Rupees each, - - - -	105	0
3	Do. do. 17½ Rupees each - -	52	8
4	Sumpretties on a salary of 8 Rs. each	32	0
8	Goomastahs at 6 Rupees each -	48	0
5	Shroffs at 5 Rupees each, - -	25	0
24	Measuring Peons at 4 Rupees each	96	0
33	Watching Peons at 3 Rupees each	99	0
6	Naiks at 6 Rupees each, - -	36	0
33	Sibbendy Sepoys at 5¼ Rupees each	173	4
	Total...	666	12
	Grand Total...	860	4

MALABAR.

There are Salt Agents at Cannanore, Tellicherry, Calicut, Ponany and Chowghaut, whose duty it is to receive the salt, which comes by sea, store and retail it. The whole are under the immediate orders and surveillance of the Collector.

	Per Month. Rs.	A.	P.	*Per Annum.* Rs.	A.	P.
6 Peishcars, - - -	239	0	0	2,868	0	0
11 Goomastahs, - -	151	0	0	1,812	0	0
24 Peons, - - - -	96	8	0	1,158	0	0
Rs...	486	8	0	5,838	0	0

CANARA.

The Salt Department of Canara is divided into those servants who are employed at the places of manufacture and those employed at the places of sale. They are classed as Superintendents, Accountants, Measurers and Peons. The transport of the Salt from the place of manufacture to that of sale is effected by contracts fixed by public competition.

List of Servants employed in the Salt Department in the Zillah of Canara.

Talooks.	Names of Tannahs.	Mootasuddies and Monigars, & Superintendents.			Sheristadars and Goomastahs or Accountants			Shroffs.			Duffadars and Peons.			Measurers			Total Establishment.			Remarks showing the duties performed by each class of Servants.
		Number.	Monthly Pay.		Number.	Monthly Pay.		Number.	Monthly Pay.		Number.	Monthly Pay.		Number.	Monthly Pay.		Number.	Monthly Pay.		
			Rs.	A.		Rs.	A.		Rs.	A.		Rs.	A.		Rs.	A.		Rs.	A.	
Hoozoor Collector's Office		0	0	0	2	40	8	0	0	0	0	0	0	0	0	0	2	40	8	These Servants are employed in examining the accounts of the manufacture and sales of salt, received from the Talooks, and preparing the periodical accounts kept in the Collector's Office and such as are furnished to the Presidency.
Manufacturing Places.																				
Cundapoor	Annagally	1	24	8	2	19	4	1	7	0	7	28	0	2	9	0	13	87	12	In these Stations Salt is both manufactured and sold. The Mootasuddies and Monigars superintend the manufacture, distribution and sales, and keep a general control in their respective divisions in guarding against smuggling and protecting the revenue. The 2d Class of Servants (Sheristadars and Goomastahs) are employed in keeping the prescribed accounts of manufacture and sales and assisting the Superintendents in their general duties. Shroffs are employed for examining the money received on the sale of salt when the collections are in any way considerable. The Peons are employed in watching the salt manufactured and stored, guarding against smuggling, and in aiding in the protection of the Monopoly. The Measurers, besides attending to their duties of measuring salt, assist the Peons in their watches, &c.
	Woderhobly	1	14	0	1	8	12	0	0	0	3	12	0	2	9	0	7	43	12	
	Harnaud	1	14	0	2	14	0	0	0	0	8	32	0	2	9	0	13	69	0	
	Byndoor	1	14	0	3	18	0	0	0	0	10	40	0	2	9	0	16	81	0	
Honore	Coomta	1	21	0	2	16	8	1	7	0	8	32	0	3	13	8	15	90	0	
	Shirally Butkul	1	14	0	2	14	0	0	0	0	8	32	0	3	13	8	14	73	[illegible]	
	Byloor	0	0	0	1	7	0	0	0	0	3	12	0	1	4	8	5	23	8	
Ankola	Magurbyle or Sanekutta	1	40	0	4	59	0	1	7	0	21	88	0	5	25	0	32	219	0	
		7	141	8	17	156	8	3	21	0	68	276	0	20	92	8	115	687	8	
Selling Depôts.																				
Mangalore	Cusbah Tannah	1	35	0	2	22	0	1	7	0	11	57	0	2	12	0	17	133	0	These are the selling Depôts. The servants in them are employed in receiving and storing the salt brought from the manufacturing places, attending to their sales, and in the general duty of protecting the Monopoly. In the Cusbah Tannah of the Mangalore Talook, the servants have also to attend to the receipt and despatch of Bombay Salt for the Depôts in the Buntwal Talook.
	Moolky	1	14	0	1	9	0	0	0	0	5	20	0	1	4	8	8	47	8	
Bekul	Munjaseer	1	7	0	0	0	0	0	0	0	5	20	0	1	4	8	7	31	8	
	Coombla	0	0	0	1	6	0	0	0	0	2	8	0	1	4	8	4	18	8	
	Cassergode	0	0	0	1	6	0	0	0	0	1	4	0	1	5	0	3	15	0	
	Neelashwar	1	10	0	1	6	0	0	0	0	3	12	0	0	0	0	5	28	0	
Buntwal	Cusbah Tannah	1	40	0	2	22	0	1	7	0	7	31	8	2	9	0	13	109	8	
	Pane Mangalore	1	20	0	1	7	0	1	7	0	4	16	0	2	9	0	9	59	0	
Oodipy	Oodiawer	0	0	0	1	9	0	0	0	0	4	16	0	1	4	8	6	29	8	
	Caup	0	0	0	1	8	12	0	0	0	3	12	0	0	0	0	4	20	12	
Barcoor	Mabukol	1	10	0	1	7	0	1	5	0	3	12	0	2	8	0	8	42	0	
	Bajeh	1	10	0	1	5	0	0	0	0	5	20	0	1	4	0	8	39	0	
Cundapoor	Hallady	1	14	0	1	7	0	1	5	0	8	32	0	1	4	0	12	62	0	
	Wondseh	1	10	0	1	5	0	0	0	0	5	20	0	1	4	0	8	39	0	
Honore	Guersappah	1	10	0	1	7	0	1	5	0	7	28	0	2	8	8	12	58	8	
	Honore	0	0	0	1	7	0	0	0	0	2	8	0	1	4	8	4	19	8	
Ankola	Cusbah Tannah	0	0	0	0	0	0	1	5	0	3	13	0	1	3	8	5	21	8	
	Sedashegur	0	0	0	0	0	0	0	0	0	2	8	0	0	0	0	2	8	0	
	Katigul	1	30	0	2	22	0	1	10	0	9	40	0	4	20	0	17	122	0	
		12	210	0	19	155	12	8	51	0	89	377	8	24	109	8	152	903	12	
	Total Salt Establishment.	19	351	8	38	352	12	11	72	0	157	658	8	44	202	0	269	1631	12	Per Annum Rs. 19,581.

List of the Salt Establishment of Madras, and the duties of each Officer.

No.	Office.	Pay Per Mensem. Rs.	A.		Nature of Duties.
1	Uncovenanted Assistant,	300	0		The immediate superintendence of the whole of the Salt Department. For details, see Board's Proceedings dated 17th January 1853.
1	Native Deputy Superintendent	42	0		To conduct the storing and sales of Salt at the Madras Platform.
1	Peishkar,	21	0		
1	Nesunda,	20	0		To keep accounts as stated in separate list B.
1	Deputy Do.	14	0		
1	Writer,	10	0		To prepare Urzees and to secure the Takeeds received from the Hoozoor.
1	Shroff,	14	0		To shroff the collections, and to keep accounts thereof, as well as of the pay distributed to servants, and of the payments on manufacturers' share, and to give Chits for Inland and Home Sales.
1	Ameen,	20	0		To superintend the manufacture, and to report transfer of Pans for registry to the Superintendent, and to maintain a strict watch over the manufacture and over the Peons.
3	Nevesindas,	10	8	each	These 5 Nevesindas are stationed at Attiput, Ennore, Poorithewauk, Vulloor and Voyaloor, to keep accounts of the scrapings and exportation of Salt, and to give the required information in registering the Pans.
2	Ditto,	10	8	do.	
1	Moochie,	7	0		To rule Accounts, bind Books, &c.
1	Duffadar,	10	8		For the security of Salt heaps in store.
1	Head Peon,	10	0		
20	Peons,	7	0	each	
8	Do.	4	0	do.	
2	Measurers,	7	0	do.	To measure the Salt for Home Sale.
1	Tom-tom beater,	4	0	do.	To beat the Tom-tom at the commencement and at the close of the sale, and to patrol during nights.

NOTE.—There is no separate Establishment at the Hoozoor for this branch of Revenue.
The whole of the Accounts are examined and checked by the Sherishtadar's department.
An Extra Establishment of Peons and Mootsuddies is entertained annually for about 8 months during the season of manufacture.
It varies with reference to circumstances.
In the present season it consists of

	RS.	A.	P.
2 Mootsuddies,...	30	8	0
1 Shroff, ...	10	0	0
4 Vuttals, ...	24	0	0
68 Peons, ...	476	0	0
7 Tom-tom beaters, ...	28	0	0
At a monthly cost of Rs...	568	8	0

M.

Specimen of Daily Cooroopoo Account of Salt Manufacture and Sale in Ackarapoottoor Pan at Negapatam.

6TH APRIL 1854.

	Garce.	Mercals.	Measures.
Remaining in Platform——Salt of 1853, -	655	214	0
Wastage in Do. - - - - - - -	16	155	0
Do. in Pan, - - - - - -	1	58	0
	17	213	0
	673	27	0

SALE.

ROWANAH No. 3011. Mappoolacooppum Adaikettan Chetty, purchased 70 mercals of salt, value Rs. 21, the salt contained in 14 bags on 2 bandies, to Mappoolacooppum. Time allowed, one day from 10 o'clock of this date.

ROWANAH No. 3012. Nunnillum Soondra Chetty, purchased 30 mercals of salt, value Rs. 9, contained in 6 bags on 1 bandy, to Nunnillum. Time allowed, 1 day from 10 o'clock of this date.

ROWANAH No. 3013. Andonipettah Parasooramah Chetty, purchased 55 mercals of salt, value Rs. 16½, contained in 11 bags on 1 bandy, to Andonipettah in Keevalore Talook—from 10 to 12 o'clock of this date.

ROWANAH No. 3014. Abishaga Cutlay Kylasha Pillay, purchased 40 mercals of salt, value Rs. 12, contained in 8 bags on 1 bandy, to Abishaga Cutlay in Nunnillum Talook. Time, one day from 10 o'clock of this date.

ROWANAH No. 3015. Negapatam Balasoobramania Pillay, purchased 40 mercals, value Rs. 12, contained in 8 bags on 1 bandy, to Negapatam in Keevalore Talook. Time allowed, from 10 to 4 o'clock of this date.

ROWANAH No. 3016. Kavaripatam Iyaroopillay, purchased 30 mercals of salt, value Rs. 9, contained in 6 bags on 1 bandy, to Teroonagasweren in Combaconum Talook. Time allowed, 3 days from 10 o'clock of this date.

ROWANAH No. 3017. Moottum Oonnamalay, purchased 40 mercals of salt, value Rs. 12, contained in 8 bags on 1 bandy, to Moottum in Keevalore Talook. Time allowed, from 10 to 4 o'clock of this date.

ROWANAH No. 3018. Nagore Viapoory Pillay purchased 40 mercals, value Rs. 12, contained in 8 bags on 1 bandy, to Nagore in Keevalore Talook. Time, from 10 to 2 o'clock of this date.

ROWANAH No. 3019. Negapatam Ramasawmy Pillay, purchased 5 mercals, value Rs. 1½, contained in a small bag, to Negapatam in Keevalore Talook. Time, from 10 to 4 o'clock of this date.

ROWANAH No. 3020. Valeppaliem Naraynasawmy Naicken, purchased 5 mercals of salt, value Rs. 1½, contained in two small bags, to Valeppaliem in Keevalore Talook—from 4 to 6 o'clock P. M. of this date.

ROWANAH No. 3021. Moolengoody Sooppa Odyan, purchased 40 mercals, value Rs. 12, contained in 8 bags on 1 bandy, to Combaconum. Time allowed, 3 days from 4 o'clock of this date.

ROWANAH No. 3022. Nagore Veerabudra, purchased 90 mercals, value Rs. 27, contained in 18 bags on 2 bandies, to Nagore in Keevalore Talook—from 10 A. M. to 4 P. M. of this date.

ROWANAH No. 3023. Negapatam Soobray Pillay, purchased 50 mercals, value Rs. 15, contained in 10 bags on 1 bandy, to Negapatam in Keevalore Talook—from 4 to 6 o'clock of this date.

ROWANAH No. 3024. Walkaudy Ramaswamy, purchased 15 mercals, value Rs. 4½, contained in 3 bags on 3 bullocks, to Walkaudy in Nunnillum Talook. Time, 1 day from 4 o'clock.

ROWANAH No. 3025. Sembencoody Veramoottoo Odayan, purchased 30 mercals, value Rs. 9, contained in six bags on 1 bandy, to Combaconum. Time allowed, 3 days from 4 o'clock of this date.

ROWANAH No. 3026. Sembencoody Aroomoogattan Odyan, purchased 30 mercals, value Rs. 9, contained in 6 bags on 1 bandy, to Combaconum. Time allowed, 3 days from 4 o'clock of this date.

ROWANAH No. 3027. Sembengoody Pereanayegatto Odyan, purchased 30 mercals, value Rs. 9, contained in 6 bags on 1 bandy, to Combaconum. Time allowed, 3 days from 4 o'clock of this date.

ROWANAH No. 3028. Sembengoody Arnachellum Naiken, purchased 30 mercals, value Rs. 9, contained in 6 bags on 1 bandy, to Combaconum. Time allowed, 3 days from 4 o'clock of this date.

ROWANAH No. 3029. Sennanoor Naguppa Chetty, purchased 70 mercals, value Rs. 12, contained in 8 bags on 1 bandy, to Sennanoor in Nunnillum Talook. Time allowed, 1 day from 4 o'clock of this date.

ROWANAH No. 3030. Ammayeppen Veerappen, purchased 50 mercals, value Rs. 15, contained in 10 bags on 2 bandies, to Ammayappen in Trivalore Talook. Time allowed, 1 day from 4 o'clock of this date.

ROWANAH No. 3031. Ponanassel Kattan purchased 30 mercals, value Rs. 9, contained in 6 bags on 1 bandy, to Ponanassel in Trivalore Talook. Time allowed, 1 day from 4 o'clock of this date.

	Garce.	*Mercals.*
Total Rowanahs 21, Rs. 237, the quantity of salt of 1853, -	1	390
Remaining in Platform of 1853, - - -	653	224
Wastage in Do. - - - - - - -	16	155
Do. in Pan, - - - - - - -	1	58
	17	213
	671	37

H. FORBES,
Collector of Tanjore.

N.

Salt Charges in all Districts for Fusly 1260.

Items.	Ganjam.	Vizagapatam.	Rajahmundry	Masulipatam.	Guntoor	Chingleput.	Madura.	Nellore.	North Arcot.	South Arcot.	Tanjore.	Tinnevelly.	Canara.	Malabar.	Madras.	Total.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Salary of the fixed Establishment,	4,258	4,096	7,695	5,229	10,407	11,503	13,351	26,660	800	6,086	13,260	10,272	15,653	5,743	5,846	140,859	
Do. extra Sibbendy, ..	0	0	0	0	0	0	0	0	0	0	0	0	2,422	0	0	2,422	
Roossooms, ...	0	0	0	128	120	0	139	1,135	0	1,763	0	1,552	0	56	351	5,244	
Extra charges and Saderwared, ..	1,400	2,394	5,591	3,437	2,217	4,120	427	8,526	75	2,584	1,546	659	3,292	2,234	26,915	65,417	
Reward for seizure of smuggled Salt, ...	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	
First Total, ..	5,658	6,490	13,286	8,794	12,744	15,623	13,917	36,321	875	10,433	14,806	12,483	21,367	8,033	33,112	2,13,942	2,13,942
Hire to Manufacturers, ...	12,856	11,192	11,259	1,311	11,459	28,081	27,335	27,811	1,426	23,769	41,025	27,463	0	0	42,556	2,67,543	
Value of Salt purchased from other Districts, ...	0	0	0	0	0	0	0	0	0	0	0	0	51,770	80,477	0	1,32,247	
Repairs, ...	10	0	0	0	0	0	0	0	0	0	0	0	0	609	0	619	
Charges of Export, ...	0	0	0	0	0	0	0	0	0	726	0	0	0	0	0	726	
Compensation for resumed Pans,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,609	3,609	
Hire of Boats, ...	0	0	0	0	6	0	0	0	0	0	0	0	13,925	0	0	13,925	
Shipping Charges, &c.. ..	0	0	0	0	0	0	0	0	0	2,097	0	0	0	0	0	2,097	
Salt Indemnification to the French Government, ...	0	0	0	0	0	0	0	0	0	21,000	0	0	0	0	0	21,000	
Second Total,......	12,866	11,192	11,259	1,311	11,459	28,081	27,335	27,811	1,426	47,592	41,025	27,463	65,695	81,086	46,165	4,41,766	4,41,766
																	6,55,708
Tuccavy, ...	350	3,033	2,531	1,300	1,700	0	0	680	0	700	0	0	0	0	0	10,294	
Grand Total....	18,874	20,715	27,076	11,405	25,903	43,704	41,252	64,812	2,301	58,725	55,831	39,946	87,062	89,119	79,277	6,66,002	

Salt Charges in all Districts for Fusly 1261.

Items.	Ganjam.	Vizaga-patam.	Rajah-mundry.	Masuli-patam.	Guntoor.	Chingle-put.	Madura.	Nellore.	South Arcot.	Tanjore.	Tinne-velly.	Canara.	Malabar	Madras.	Total.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Salary of the fixed Establishmen, ...	4,313	4,124	7,075	5,271	10,247	12,269	13,366	26,346	5,706	13,232	10,323	15,614	5,792	5,943	1,39,621	
Do. extra Sibbendy, ..	0	0	0	0	0	0	0	0	0	0	0	2,553	0	0	2,553	
Roossooms, ...	0	0	798	71	107	0	0	1,143	2,135	0	1,553	0	56	353	6,217	
Extra charges and Saderward, ..	1,337	1,843	6,812	1,026	3,505	4,127	399	3,646	1,479	442	1,138	4,727	11,349	14,928	56,758	
Reward for seizure of smuggled Salt, ..	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
First Total..	5,650	5,967	14,685	6,368	13,859	16,396	13,765	31,135	9,320	13,674	13,014	22,894	17,197	21,224	2,05,149	2,05,149
Hire to Manufacturers, ...	10,929	4,812	13,041	0	28,673	46,338	24,710	41,936	17,317	38,984	27,506	0	0	41,414	2,95,660	
Value of Salt purchased from other Districts	0	0	0	0	0	0	0	0	0	0	0	59,311	69,764	0	1,29,075	
Repairs, ...	330	0	0	0	0	0	0	0	0	0	0	0	465	0	795	
Charges of Export, ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Compensation for resumed Pans, ...	0	0	0	0	0	0	0	0	0	0	0	0	0	2,438	2,438	
Hire of Boats, ...	0	0	0	0	0	0	0	0	0	0	0	15,880	0	0	15,880	
Shipping Charges, &c., ...	0	0	0	0	0	0	0	0	1,590	0	0	0	0	0	1,590	
Salt Indemnification to the French Govt.	0	0	0	0	0	0	0	0	7,000	0	0	0	0	0	7,000	
Second Total,	11,259	4,812	13,041	0	28,673	46,338	24,710	41,936	25,907	38,984	27,506	75,191	70,229	43,852	4,52,438	4,52,438
																6,57,587
Tuccavy, ...	500	3,315	3,562	3,322	2,625	1,076	7,715	725	937	0	0	0	0	0	23,778	
Grand Total..	17,409	14,094	31,288	9,690	45,157	63,810	46,190	73,796	36,164	52,658	40,520	98,085	87,426	65,076	6,81,365	

Salt Charges in all Districts for Fusly 1262.

Items.	Ganjam.	Vizagapatam.	Rajahmundry.	Masulipatam.	Guntoor.	Chingleput.	Madura.	Nellore.	South Arcot.	Tanjore.	Tinnevelly.	Canara.	Malabar.	Madras.	Total.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Salary of the Establishment.	4,295	4,137	7,237	5,115	10,251	12,460	13,296	26,447	6,004	12,884	10,320	16,387	5,838	7,332	1,42,003	
Do. extra Sibbendy	0	0	0	0	0	0	0	0	0	0	0	3,007	0	0	3,007	
Roossooms.	0	0	520	194	110	0	0	1,139	773	0	1,553	0	46	303	4,638	
Extra charges and Saderwared	1,612	1,976	3,831	4,605	3,771	5,880	1,093	2,541	2,299	988	774	2,638	9,988	17,778	59,774	
Reward for seizure of smuggled Salt. ..	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
First Total.	5,907	6,113	11,588	9,914	14,132	18,340	14,389	30,127	9,076	13,872	12,647	22,032	15,872	25,413	2,09,422	2,09,422
Hire to Manufacturers.	19,186	18,535	10,623	3,638	29,380	11,319	24,668	34,424	20,320	44,275	22,811	0	0	43,350	3,12,529	
Value of Salt purchased from other Districts..	0	0	0	0	0	0	0	0	0	0	0	64,333	76,515	0	1,40,848	
Repairs..	694	0	0	0	0	0	0	0	0	0	0	0	621	0	1,315	
Charges of Export.	0	0	0	0	0	0	0	0	138	0	0	0	0	0	138	
Salt Compensation.	0	0	0	0	0	0	0	0	0	0	0	0	0	2,215	2,215	
Hire of Boats.	0	0	0	0	0	0	0	0	0	0	0	13,506	0	0	13,506	
Shipping Charges, &c.	0	0	0	0	0	0	0	0	3,386	0	0	0	0	0	3,386	
Salt Indemnification to the French Govt.	0	0	0	0	0	0	0	0	21,000	0	0	0	0	0	21,000	
Second Total. ...	19,880	18,535	10,623	3,638	29,380	41,319	24,668	34,421	44,844	44,275	22,811	77,839	77,136	45,565	4,94,937	4,94,937
																7,04,359
Tuccavy.	800	3,498	5,917	9,059	4,275	3,500	0	835	950	0	1,000	0	0	0	29,834	
Grand Total. ..	26,587	28,146	28,128	22,611	47,787	63,159	39,057	65,386	54,870	58,147	36,458	99,871	93,008	70,978	7,34,193	

O.

Salt Sales for Fusly 1260.

	Districts.	For Consumption in the District.	For other Districts.	For Foreign States	French Government.	Export by Sea.	Total.
		Indian Maunds.	Indian Maunds.	Indian Maunds.	Indian Maunds.	Indian Maunds.	Indian Maunds.
1	Ganjam, - - -	24,345	73,015	1,90,560	0	0	2,87,920
2	Vizagapatam, -	1,25,136	5,732	8,571	0	0	1,39,439
3	Rajahmundry, - -	1,77,327	2,976	8,907	1,800	25,200	2,16,210
4	Masulipatam, -	57,255	2,996	2,19,920	0	0	2,80,171
5	Guntoor, - - -	97,825	13,475	3,14,117	0	0	4,25,417
6	Nellore, - -	2,00,673	1,46,551	93,570	0	99,486	5,40.280
7	Chingleput, - -	26,346	2,38,372	1,15,102	0	0	3,79,820
8	North Arcot, - -	0	21,045	0	0	0	21,045
9	South Arcot, - -	82,832	1,50,823	47,772	49,911	15,840	3,47,178
10	Tanjore, - -	3,87,385	1,12,191	12,000	12,120	0	5,23,696
11	Madura, - - -	2,32,717	61,854	58	0	0	2,94,629
12	Tinnevelly, - -	2,90,901	60,072	0	0	0	3,50,973
13	Canara, - - -	1,98,437	0	2,64,775	0	0	4,63,212
14	Malabar, - -	2,39,434	48,528	52,132	0	0	3,40,094
15	Madras, - - -	1,16,418	69,213	3,13,080	0	1,11,050	6,09,761
	Total...	22,57,031	10,06,843	16,40,564	63,831	2,51,576	52,19,845

Salt Sales for Fusly 1261.

	Districts.	For Consumption in the District.	For other Districts.	For Foreign States	French Government.	Export by Sea.	Total.
		Indian Maunds.	Indian Maunds.	Indian Maunds.	Indian Maunds.	Indian Maunds.	Indian Maunds.
1	Ganjam, - - -	25,717	95,533	2,85,917	0	0	4,07,168
2	Vizagapatam, -	1,54,569	5,181	1,589	0	0	1,61,339
3	Rajahmundry, - -	1,91,136	3,713	14,581	1,440	81,200	2,92,071
4	Masulipatam, -	57,906	8,778	1,77,114	0	0	2,43,798
5	Guntoor, - - -	98,658	14,012	2,25,828	0	0	3,38,497
6	Nellore, - -	2,03,927	1,89,087	1,66,174	0	1,61,200	7,20,388
7	Chingleput, - -	33,817	3,47,746	1,66,683	0	0	5,48,246
8	South Arcot, - -	91,980	1,04,587	69,838	24,870	0	2,91,274
9	Tanjore, - - -	3,90,812	1,27,089	12,720	13,080	0	5,43,701
10	Madura, - - - -	2,54,959	1,11,280	90	0	0	3,66,329
11	Tinnevelly, - -	3,01,647	58,653	0	0	0	3,60,300
12	Canara, - - -	2,00,761	0	2,43,507	0	0	4,44,268
13	Malabar, - - -	2,39,765	34,090	51,835	0	0	3,25,690
14	Madras, - - -	1,37,205	42,648	2,41,131	0	6,000	4,26,984
	Total...	23.82.859	11.42.397	16,57,007	39,390	2,48,400	54,70,053

Salt Sales for Fusly 1262.

	Districts.	For Consumption in the District.	For other Districts.	For ForeignStates.	French Government.	Export by Sea.	Total.
		Indian Maunds.	Indian Maunds.	Indian Maunds.	Indian Maunds.	Indian Maunds.	Indian Maunds.
1	Ganjam, - - -	45,322	78,432	2,54,563	0	0	3,78,318
2	Vizagapatam, -	1,71,268	4,834	1,183	0	0	1,77,285
3	Rajahmundry, -	2,01,781	17,546	27,249	1,440	19,916	2,67,931
4	Masulipatam, -	44,246	3,904	93,467	0	0	1,41,617
5	Guntoor, - - -	88,832	30,050	4,91,008	0	0	6,09,890
6	Nellore, - -	2,03,938	2,08,240	89,564	0	55,650	5,57,392
7	Chingleput, -	32,529	2,17,544	1,68,538	0	0	4,18,612
8	South Arcot, - -	58,862	78,562	55,350	43,848	3,000	2,39,622
9	Tanjore, - - -	3,71,106	1,01,944	12,120	12,840	1,800	4,99,810
10	Madura, - -	2,69,016	1,13,876	112	0	0	3,83,004
11	Tinnevelly, - -	3,12,726	43.689	0	0	0	3,56,415
12	Canara, - - -	1,92,764	0	2,67,514	0	0	4,60,278
13	Malabar, - - -	2,48,534	37,229	47,289	0	0	3,33,052
14	Madras, - -	1,25,429	92,943	2,33,483	0	11,700	4,63,554
	Total..	23,66,353	10,28,793	13,41,440	58,128	92,066	52,86,780

P.

COLLECTOR'S CUTCHERRY,
On Circuit Hossdroog,
10*th November*, 1852.

No. 98.

FROM

F. N. MALTBY, ESQ.
Collector of Canara.

To

W. H. BAYLEY, ESQ.
SECRETARY TO THE BOARD OF REVENUE,
Fort St. George.

SIR,

I have the honor to acknowledge an Extract from the Proceedings of the Board of Revenue, under date 16th September, 1852, calling upon me to report my opinion upon the feasibility and expediency of throwing open the Salt manufacture of Canara, subject to a fixed duty.

2. I have already submitted my opinion on the expediency of the

substitution of an Excise for the Monopoly system, in my letters of the 3d September and 3d December 1851, and 22d of September 1852; observing that I thought that this measure might be rendered necessary, to prevent the supercession of the Home Manufacture, when Goa, Arabian, Bombay and English Salt is admitted at a fixed duty. The system of excise is free from so many objections to which the raising of a revenue by monopoly is open, that the change is very desirable if it is practicable; and I therefore proceed at once to lay before the Board, all the information which I have been able to collect calculated to lead to a decision of this very important subject.

3. But I would here beg to correct an impression which the Government have received, and which appears to have influenced them in deciding to withhold from the Salt of Bombay, the privilege, now conceded to Goa and Arabian Salt, of admission into this district at a fixed duty; viz., that Bombay Salt is of inferior quality. This is by no means the case in the opinion of the inhabitants of the country above the Southern Ghâts; by them it is greatly preferred to that of Canara, from the firm solid texture of its crystals as well as its quality, and it has, for this reason, an advantage over the Salt of this District for inland trade, although the people of the Coast prefer the Salt of Canara.

4. Should it appear from the following Statement that it is feasible to establish an excise in Canara, the wishes of the Court of Directors will then be fully carried out, by the trade in Salt from all countries being placed on an equal footing as to the Government duty, and being thus left to be carried on, on the ordinary principles of trade. Although, therefore, the question is one, as I have stated in my previous letters, of great difficulty, it is most desirable, that, if possible, these difficulties should be surmounted.

5. A change from the system of Monopoly to that of Excise must depend upon a consideration of the following questions.

I. Adjustment of the claims of the present manufacturers.

II. The prevention of illicit manufacture.

III. The supplying the inland trade at those places where for sometime past the traders have found a regular supply in the Government Stores.

6. *First.* The manufacture of Salt is limited to the three Northern Talooks of Ankola, Honore and Cundapoor. The following are the names of the places at which the Pans are situated, the number of proprietors,

the quantity permitted to be manufactured, and the actual average produce of the last five years.

Places of Manufacture.	No. of licensed manufacturers.	Fixed Annual Quantity allowed.		Average produce per year upon accounts of 5 years, or from Fusly 1257 to 1261.		Extent of Pans as per Survey.		Average produce per Acre.		Average produce for each Manufacturer.	
		Garce.	M.	Garce.	M.	Acre	G.	G.	M.	G.	M.
ANKOLA.											
Nagerbyle or Sanecutta,	154	1,282	82	1,040	254	178	0	5	339	6	303
Burghi,	12	100	0	81	319	20	0	4	36	6	326
	166	1,382	82	1,122	173	198	0	0	0	0	0
HONORE.											
Coompta,	25	350	0	373	191	0	0	0	0	14	375
Shirally Butkul,	115	566	399	478	128	0	0	0	0	4	63
Byloor,	20	89	168	77	159	0	0	0	0	3	348
	160	1,006	167	929	78	0	0	0	0	0	0
CUNDAPOOR.											
Hangally,	53	391	0	226	126	0	0	0	0	4	108
Waderhobly,	51	367	119	212	15	0	0	0	0	4	63
Arnaud,	86	280	0	228	311	0	0	0	0	2	264
Byndoor,	45	264	200	127	254	0	0	0	0	2	334
	235	1,302	319	794	306	0	0	0	0	0	0
Total..	561	3,691	168	2,846	157	0	0	0	0	0	0

7. It will be thus seen, that, nominally, 561 Proprietors are interested in the manufacture of 3,691 Garce of Salt, for which they are paid from 7 to 12 Rupees per garce. This price being paid immediately, and being in fact far above the cost of manufacture, the license to manufacture is a valuable property, which, through a long series of years, has been liable to all the transfers and sub-divisions of Indian family property, so that the parties really interested are very greatly in excess of the numbers above given.

8. A sudden change from a system so advantageous to the manufacturers, to one of excise, might, if the supply were at once greatly increased, fall very severely upon these small proprietors. Few of them have the means of either waiting for a market, or advancing the duty so as to bring their produce into the market, and I should find it very difficult to offer any suggestions of a practical nature for effecting the necessary change of system. But the immediate effects of the change are so difficult to foresee, that I doubt, whether any thing but experience can guide us safely.

9. If the resolution be taken of throwing open the trade at a fixed duty of 90 Rupees, it is possible that the manufacturer may, for some time to come, realise a larger sum than the Government now pays. The price of Salt throughout the district is now 120 Rupees per garce, and at this rate it is sold close to the Pans as elsewhere. The Goa Salt is now underselling ours, because it can be purchased at Goa, and carried from thence at less than 30 Rupees. Considering how much nearer the Pans of Canara are to the Mysore country, and the improved roads available, it is highly probable that at first the Salt may realise to the manufacturers a higher price than at present, and continue to do so till the area of production is greatly enlarged. The duty will be paid by the purchaser as it is now paid on the Goa frontier, and it may be better worth the while of the traders to come to Nagerbyle, and pay 15 Rupees, than to go to Goa and pay 5. Applications will gradually be made for leave to open Pans, but only as these are licensed will prices fall.

10. The produce of the district being at present below the consumption, the price will be regulated by that at which Foreign Salt can be imported, and I do not think that Bombay Salt can be landed at less than 110 Rupees, or Goa Salt brought to the Frontier at less than 105. Until, therefore, our own area of production is enlarged, I do not think the price of our Salt will fall below what the Government is now paying for it.

11. If this should prove correct, the present gain to the holders may be taken as a compensation for the future gradual decline of prices, and supersede the necessity of any further compensation than it will be desirable to afford by lowering the assessment of some of their lands. Much of the land is so heavily assessed, that the revenue is really collected by carrying to account the price of the Salt. A revision of the assessment on fair principles will be the proper means of adjustment in these instances.

12. It is to be remembered, that the high price we now pay to the manufacturers is partly a compensation for limiting their production. The chief expense being incurred, whether 10 garce are manufactured or 20, the price of the limited quantity must cover the whole expense, so that the very withdrawal of this limitation goes far to render any compensation unnecessary.

13. *Second.* It does not appear to me that the system of Excise holds out any temptation to manufacture illicitly beyond that afforded by the present system. It seems to be the opinion of my Native Cutcherry that it does so, but I cannot see in what manner. The result depends upon the vigilance of those appointed to watch the manufacture. Our object *now* is to bring all that is manufactured to the

Government Store—the object *then* will be to bring all that is manufactured to the place where it is excised. All that is now smuggled out is worth 120 Rupees, by the new system it will be worth only 100, so that on the whole the temptation is, I think, diminished, and the attention of the Government establishment will be concentrated on the one object of preventing the export of unexcised Salt.

14. At present there is no doubt that much Salt is clandestinely sold. So much is this the case that the Government sales fall off in proportion as the season is favorable for manufacture. I do not think that under an excise there would be any greater opportunities for illicit sales.

15. We have now data to show what is the average produce of the Pans, and it will be a part of the Excise system to cancel the licenses of all those who cannot show that they have brought for excise a quantity proportional to the extent of their Pans.

16. The smuggling which is chiefly to be feared is that which is likely to be carried on, on the sea border. This question is distinct from that of Monopoly and Excise.

17. Under this head it is proper to consider the adaptation of the various Pans in point of locality, for an excise system; for if the establishment necessary for Excise is not proportionally smaller than that required for Monopoly, the reduction of income from 120 Rupees to 90 per Garce may not be fully compensated.

18. The Statement which I have given in para. 6, shews that the principal site of manufacture is at present at Sanecutta, a creek of the Tudderi River. The quantity now produced there is more than one-third of our whole produce, and it is so favorable a site, that when restriction is withdrawn and the area of the Pans increased, the production may be very greatly extended. The site is also particularly favorable for the enforcement of an excise system, being surrounded either by naked barren hills or by the creek. The Pans are only accessible by very conspicuous roads, or by boats, and the boats must pass through the sluice close by the storing houses.

19. Here therefore there is every advantage in favor of an excise system; an active Superintendent might have his eye over the whole of the works, and the increased area will entail very little extra expense in watching and guarding.

20. Having for some time past had a strong impression that the measure which I found had been adopted of admitting Goa Salt at a fixed duty, and that which circumstances called for of admitting sea-

borne Salt also at the same duty, would eventually necessitate the relaxation of the Monopoly, I took advantage of the adjustment I had to make of the Pans when lately increasing their area, to have each carefully measured, mapped, numbered and marked by four boundary stones.

21. This site, so admirably adapted for production, is connected with two roads which bring the trade of the interior to the Coast at Tudderi and Coompta. The Salt sold to this trade under the present system is priced 120 Rupees per Garce. On the supposition of an excise it will be priced 90 Rupees, and the cost of production with ordinary profits—take this at the highest price which we now pay to the manufacturers (Rupees 12) with the addition of 3 Rupees for risk of sale, loss by keeping and rent of store house—and the price is only 105 instead of 120 Rupees.

22 It appears to me that this change will be calculated to bring to Tudderi a large proportion of the trade which now goes to Goa. Far into the heart of the Mysore country Goa Salt now finds its way, because it is cheaper than ours. I believe that at Sanecutta, Salt may be made as cheaply as at Goa, and by the excise system they will be placed in fair competition, Sanecutta having the advantage of proximity to the trade and excellent roads, and I believe that this measure will have a very favorable effect in encouraging the trade of Tudderi.

23. With the remaining Salt works of the district I am not so well acquainted; some of them are scattered and exposed and may be too expensive to guard, and it may be necessary to discontinue them, either compensating the owners, or giving them licenses elsewhere. After Sanecutta, those of the Cundapoor river are the most important, and it will be desirable to concentrate the manufacture at places so advantageously situated, with reference to the inland trade, as Sanecutta, Cundapoor and Butkul.

24. I beg to annex a map which will exhibit at one view the places of manufacture, with the quantity manufactured, the places of sale with the quantity sold, and the principal lines of traffic with the Balaghât.

25. *Third.* This leads me to the third, and perhaps the most important question of all, viz., whether under a system of Excise the necessary quantity of Salt will be available in all parts of the district, for home consumption and for the trade carried on with the interior. I do not feel any doubt of the Coast Maganies being well supplied more cheaply than at the rate now prevailing, but the question is, whether the interior and the trade with the Balaghât, will be as well supplied as when the Government provided a regular stock.

26. On this point I entertain some doubts. That the trade is not

carried on with sufficient activity by the private dealers is proved by the fact that we have always found it to the advantage of Government to establish Cotays up the navigable rivers. I am not aware of any instances in which the private dealers have sent up Salt to meet the inland traders at the heads of our navigable rivers. I observe from a report of Mr. Dickinson, that before the Guersippa Cotays were established, the merchants offered to pay 5 Rupees extra per garce if the Government would establish a sale Cotay there. This shows that there was an opening for private speculation, and the same is now the case at Oopenangoody, but it is not taken advantage of.

27. I therefore consider that an important part of the proposed measure should consist in completing the connexion between the Ghâts and the Coast, so that if the sellers do not take advantage of the navigable rivers to push the Salt into the interior, the buyers may have easy access to the Coast markets.

28. The map will shew that but few additions to our present roads are necessary to bring the Ghât roads into connexion either with a place of manufacture with the Sea Coast, or with some considerable trading town of the interior. Those which are necessary I have marked in yellow, and I must state, that I should wish these to be constructed before the traders of the interior are made dependent upon the private trade of this district for so essential a necessary of life, the supply of which has been so long undertaken by the Government.

29. This applies particularly to Guersippa, for although it possesses water communication with Honore, I do not think that the private traders will convey a sure and regular supply of Salt from the pans at Sanecutta, by sea to Honore, and thence by boat to Guersippa.

30. Having thus stated the principal facts connected with the monopoly of the district and the proposed change, it will, I think, be expected, that I should state distinctly whether I consider that the Monopoly can be converted into an Excise, and if so, by what measures this can be most easily and safely effected.

31. I must therefore repeat what I have stated in my former letters, that I think that the interests of the manufacturers of this district could not be allowed to outweigh the advantages of admitting Foreign Salt on the usual principles of trade, especially when this has been already carried, by admitting that of Goa and Arabia, but that the admission of Foreign Salt renders a change in our own system indispensible, either by lowering our monopoly price or converting it into an excise. The conversion into an excise I consider under every point of view the proper measure, and I also think that it will, most probably, not be disadvantageous to the manufacturers.

32. But taking into account the various circumstances connected with the trade, and the serious inconvenience attending sudden changes, the course I would venture to recommend is, that, before any further steps are taken, the result of the admission of sea-borne Salt should be ascertained. If, as I anticipate, the result should be that Foreign Salt begins to supersede our own, this will appear by our sale Cotays filling with Salt beyond the demand of the purchasers, while the Sea Customs revenue will shew the quantity imported. When this is the case, when our Cotays have a good supply, the change can be made without danger to the community. We should then give the manufacturers permission to sell their Salt on the spot at a duty of 90 Rupees, competing with Goa, Bombay, Arabia and England. Considering the advantages they possess in proximity, it is probable, that the whole of their produce would be bought up for the trade above the Ghâts, or that in hopes of its being so, they might not at first enter into trade with the south of the district. But the supply in the Government Stores throughout the district will be available, as before, at 120 Rupees, and prevent any loss to the consumers till the trade runs in its natural channels.

33. It is only in the south of the district, and only by the inland traders, that Bombay Salt is preferred, and there it is greatly preferred to our own. By admitting it, as I have before urged, we shall ascertain how far the merchants are prepared to pay the duty and carry on the trade, and how far it is likely to supplant our home-made Salt. Having this means of effecting the change step by step, I do not recommend any further immediate measure than the throwing open the Bombay trade; but I am very desirous that a system by which our trade is placed at a disadvantage in comparison with that of Goa, should cease, and Tudderi should have this additional means of attracting the trade for which it is so well adapted. It will therefore be my object to advise a change to excise as soon as I feel sure that this can be done with perfect safety.

34. In the meanwhile if our roads to the coast are improved, and the traders have learnt, in some degree, to look to the dealers for their supply, the merchants of the South will be prepared to deal in the Salt of our own district as they do in Bombay Salt, and the various towns of the district, as well as the trade, will be supplied with either Bombay or Canara Salt as soon as the Monopoly is relaxed.

35. I would here beg to observe that in proposing that the Salt of Bombay be admitted at a fixed duty, I would recommend that it be admitted into this district on the same terms as into the various districts of Bombay, and into Bengal. In the Minutes of Consultation dated the 2d April 1852, it is observed, that "the Government are not prepared

to go beyond the admission of Arabian Salt for the present. Before the other suggestions of the Collector are adopted, and Bombay Salt, said to be an inferior article, admitted at the same duty of 90 Rupees per garce, with liberal allowance for wastage, more information seems necessary."

36. I think that if Bombay Salt is admitted at a fixed duty, there should be no allowance for wastage. It should in every respect compete fairly with our home-made Salt, and one of the great advantages of the proposed system will be, that all calculations of wastage are got rid of. I propose that the Salt which has been excised at Bombay at 90 Rupees, be admitted into this district only if the merchants find it profitable to bring it, and no allowance should be made for sea carriage. The difference between 90 Rupees the duty, and 120 Rupees our monopoly price, should cover all expenses, and determine whether Bombay Salt finds its way into the district in the course of ordinary trade, as that of Goa does.

37. Were I able to recommend that the excise be at once substituted for the monopoly, several very important questions would require to be attentively considered, such as the extent of the establishments required, the allowance to be made for wastage, the arrangements necessary for storing the Salt till sold, and the general result to be anticipated from the proposed change. But I think it is not desirable that I should enter fully upon these questions at present, and I only venture to offer the following more general remarks.

38. The Board will see by the annexed paper* the system followed in Bombay, and I find that the excise duty of 12 Annas per maund is not a net Government revenue. The expensive establishments for protecting the excise have to be deducted from this revenue. It would be very useful to learn what is the actual cost and what the proportion which it bears to the revenue. This would be an useful guide in framing the necessary arrangements in this district.

39. By the Bombay system, after the Salt is stored, the Government still strikes off any quantity lost by deliquescence between the time of storing the Salt and its exportation. I am inclined to think that it would be preferable to leave this to be borne by the manufacturer, the duty being made so much lower as to compensate this responsibility.

40. In this climate it will be essentially necessary that store-houses be provided, and I think it may at first be necessary that they be

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* Enclosure, No. 4. (not printed.)

provided by the Government and a rent charged for them. For the quantity now made they already exist, and in each case where application is made to open pans, one part of the agreement must be, that a store-house is to be built.

41. To judge of the result likely to follow a change to the system of excise, the following is the nearest calculation I can make.

42. The average produce of the district for the year, on the average of 5 years, is 2,846 garce, which, at 90 Rupees, gives a revenue of 2,56,140 Rupees. But the consumption of the district being 3,847 garce, the gross receipts will be 3,46,230 Rupees inclusive of Sea Customs.*

43. The expense of the establishments at the place of manufacture is Rs. 10,254-3-11.

44. The net profit may therefore be reckoned at about 3,36,000 Rupees.

45. On the other hand, the result of the sale of the same quantity of Salt by monopoly has been—

Total outlay,......	Rs.	5,40,440	12	6
Total Receipts,...	„	23,04,853	0	1
		17,64,412	3	7

giving a net profit of Rupees 3,52,882 Rupees a year.

46. This calculation is formed on the supposition of the system being assimilated to Bombay, where the cost of superintendence falls on the Government, and it may be considered as equivalent to a reduction of a considerable per centage on our present Salt tax, perhaps as much as 15 per cent. on Salt sold at the place of manufacture, equalizing it with the Bombay tax.

47. I beg to add a sketch† of some of the rules which I think will be necessary in carrying out such a change of system as appears to be called for. It is, however, only intended as a sketch.

48. The change is, I think, rendered necessary by the admission of Foreign Salt, but not immediately so, and I shall, with the permission of the Board, proceed to have surveys made of all the Pans, similar to that already made of Nagerbyle.

I have the honor to be,
Sir,
Your most obedient Servant,
F. N. Maltby,
Collector.

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* The Goa frontier duty is omitted in each case. † Enclosure No. 5.

RULES.

The Government having resolved to discontinue the Monopoly of Salt, and to substitute a fixed duty of 12 Annas per Indian Maund; it is hereby notified, that in the ensuing season, the Government will cease to purchase the Salt manufactured by the holders of Andazahs.

In lieu of this any of those holders, will be permitted to sell their Salt to private dealers paying to the Government the fixed duty of 12 Annas per Indian Maund.

Parties desirous of manufacturing upon these terms, are to give in a Durkhast before the , stating the extent of the Pans in their possession, and upon which they propose to manufacture.

The Pans are to be prepared and marked by boundary stones or posts, they will then be measured and numbered by the Darogah. The parties will enter into a penalty bond not to alter the limits of the Pans.

The parties applying must shew that they are prepared to pay the duty and export the Salt as soon as manufactured, or to store it at their own risk in the bonded Cotays. They will be required to give security in the name of respectable dealers who are prepared to purchase their Salt, unless they are themselves competent to carry on the trade.

The Salt, as soon as made, must be heaped on the Government terraces, and unless the duty is paid and the Salt removed within days, the Pans will be flooded, and the manufacture cease, and the Salt will be sold by public auction.

But parties manufacturing more than garce will have the option of storing it in Cotays at their own risk, the Cotays will have two keys, one to be kept by the owner and one by the Government. The owner will be responsible to pay the duty on all the Salt so stored, but an allowance of per cent., will be made if the Salt is stored through a whole monsoon, *i. e.* for every 120 maunds stored, he will on exportation, pay the duty on 108 maunds.

The duty must be paid before the Salt is removed, which is to be done in quantities of not less than 10 garce, unless the owner shall give security for the whole duty, when he will be allowed to remove it by a garce at a time.

When Salt is removed on payment of the excise, it is to be taken beyond the boundaries to be drawn round each of the places of manufacture, and no private stores are to be kept within those boundaries.

F. N. Maltby, *Collector.*

Q.

Minute of J. Goldingham, Esq. Second Member of the Board of Revenue, on Salt Revenue.

1. Whatever may be the form of administration finally fixed, it is desirable that the term "Monopoly" should be abolished, and "Excise" substituted. The word "Monopoly" is the term used in the Regulation.

2. The Monopoly is conducted under the authority of Regulation I. of 1805. Its provisions are as follows:—

Sec. III. I. The manufacture, sale, transit, export and import of Salt, whether by sea or land, shall be on account of Government.

Sec. IV. II. Payments, as wages to Proprietors of Salt Pans and to laborers, to be made with the reference to the standard heretofore in force, a similar commutation to be made in the case of Enamdars and others enjoying similar grants out of the Salt Revenue.

Sec. V. III. Places of manufacture fixed by Government where manufacture may be suppressed, in such cases compensation is to be made.

Sec. VIII. „ XIII. IV. Clandestine manufacture liable to fine, and parties aiding and abetting by not giving information of clandestine manufacture or import, liable to punishment.

Sec. XII. „ XIV. V. A Rowanah necessary to cover transport, without it, the article is liable to seizure and confiscation.

Sec. XVIII. VI. Fraudulent practices respecting Salt, punishable.

3. The objections to the foregoing Enactment are, *first*, that it establishes a complete monopoly as regards the manufacture, sale, transit, export and import of Salt. *Second*, that it confers an arbitrary power of suppression of manufacture, and *thirdly*, that power is given to the Officers of Government to detain this article in transit.

4. Practically the objections amount to little. The trade in Salt is free after the monopoly price has been paid, suppression of manufacture can seldom, if ever, occur, as the object of Government is to

manufacture as much as they can. Detention of Salt in transitu only occurs within the vicinity of the Coast, where the pans are situated. Beyond those limits the Rowanah is an useless document, because the Trader sells as he goes along, and there can be little means of judging whether the Salt, the Trader carries with him, and the Salt of the Rowanah, are identical. The Rowanah is in fact of avail only within certain limits; it is open to serious objection, not only as interfering with the freedom of the trader, but affords a handle for extortion. If the Rowanah is delivered up by the Trader to the Officer of Government at the place for which it was issued, it is returned to the place of issue, and in this way a comparison is instituted for the purpose of ascertaining if the sales of salt, as shewn in the accounts, correspond. The Rowanahs are not, however, generally delivered up, nor would it be proper to require their surrender by a legislative Enactment.

5. Thus, practically, there is really little to complain of. Under an Excise, some degree of surveillance is necessary, and there seems little difficulty in substituting that system for the present Monopoly. The following shews, in juxtaposition, the working of the Monopoly and what will be the working of a system of Excise.

MONOPOLY.	EXCISE.
MANUFACTURE.	MANUFACTURE.
The quantity of Salt to be manufactured is fixed by authority. In reality it is unlimited, because it is the interest of Government to provide for the largest possible sales.	6. Manufacture to be thrown open.
The places of manufacture are fixed. This is in a great degree nominal, as the supply must be kept up to the demand.	7. No restriction as to place, except as respects difficulty of surveillance in levying the excise.

8. Where the excise does not assume the form of a tax on the land, all salt must be stored or bonded, till it is sold. Where facilities of storing or bonding do not exist, there must be some restriction as to the selection of these places, as places of manufacture. There is no hardship in this, as Salt Pans do not exist in such places at present, and the land belongs to Government. The land lies along the sea coast, and is low and swampy, very little of it, if any, is private property, and where such exists, there is no right or privilege of manufacture. The extent of spare land belonging to Government is without limit.

STORING OF SALT.

All Salt is Stored on Platforms of earth raised for the purpose. The Platforms are surrounded by a ditch with one entrance only. The Salt is put up in heaps of 10 or 20 garces, the former is most convenient, as the Trader prefers purchasing the entire heaps without measurement.

The number of Platforms is limited by the supply which it is necessary to keep up. They extend along the Coast.

All Salt as soon as it is taken out of the Pans is removed to the Platform, where, after it is sufficiently dry, it is put into heaps.

SALE OF SALT.

All Salt is sold on account of Government. The selling price is Rupee 1 per maund, or Rs. 120 per garce of 400 mercals, each mercal containing 12 seers, and each seer being 80 Rupees' weight.

The price paid by Government to the manufacturer varies, but does not exceed Rupees 10 per garce.

STORING OF SALT.

9. Where the excise is not imposed on the land itself, the Salt must be stored and watched as here explained.

10. Under an excise, the line of Platforms will be probably extended as parties may be desirous to take up land and open new places of manufacture. This can only be permitted under rules for the protection of the revenue. Two rules will suffice, first, that the quantity of Salt to be manufactured shall be sufficient to fill a Platform, and secondly, that the manufacture shall not be in places where an effective surveillance cannot be exercised.

11. The same under an excise, where the duty is levied on the manufactured article and not on the land.

SALE OF SALT.

12. Under an excise, the Government will not interfere in the sale. The excise will be collected either on the land used for manufacture, or on the Salt at the time of Sale. The owner of the Salt will fix his own price.

13. The Government will be relieved from all payments on account of manufacture.

14. Supposing Rupees 10 to represent the cost of manufacture to the Government, it is obvious, that the manufacturer will produce the article for much less. He will charge the Trader as much as he can get above the cost of production, but this is not likely to be great, as competition will here exercise its ordinary effect in keeping down the price.

15. Supposing then that the excise is levied at the time of Sale, the only change, in passing the monopoly to an excise, will be freedom of manufacture and freedom of sale; the details of management, such as watching the Salt during its manufacture that it may not be clandestinely sold, and its custody on the Platforms previous to sale, will be the same. The term monopoly will no longer exist. The system of administration in many respects will be the same. The expense to Government will be diminished by the amount paid at present to the manufacturers, but an additional charge will be incurred on account of extension of Platforms and custody.

16. The excise may be imposed under two forms. *First.* By a tax on the land, and *secondly*, by its levy from the Trader at the time of sale. It seems desirable that both should be authorized by Law, and that it should be left to the parties interested in the manufacture to choose the one or the other, with the proviso that both systems shall not be permitted in the same locality. This is necessary for the protection of the revenue, otherwise the Salt manufactured on the land not taxed will be clandestinely taken to the land which is taxed, and there mixed with its produce. Extensive tracts of spontaneous Salt are found in some districts, and in these cases the cost of gathering is almost the only cost to parties to be placed in possession of these swamps. This should be considered in fixing the duty on the land.

17. Where the excise is to be levied at the time of sale, it may be left optional with the owners of the Salt on the Platforms to sell it on their own account or to make it over to Government after it is received into store, receiving from Government a fair value similar to the manufacturer's share, as at present. The manufacturers are poor and unable at once to take the sale into their own hands, or to wait for a return to their labor and capital till the Salt is sold. Their poverty also sometimes requires that advances should be made to them previous to manufacture. It seems desirable, therefore, that an option, as above stated, should be given to the manufacturers, not only on their own account, but also to obviate any confusion and embarrassment to the people and to the revenue that may arise from a sudden change* from one system

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* NOTE.—If the change is sudden, it is probable, that the supply of Salt will fall off at first, and for some time to a very serious extent, so as to leave the inland districts without Salt, and to occasion a high price of the article. The loss of Revenue would also be very large.

to another. Complete freedom of manufacture will be open to the class who may avail themselves of the option of receiving a fixed value or price from Government. Both plans cannot however be permitted in respect to the Salt on the same Platform.

18. Supposing then an Excise to be adopted on the foregoing principles, the Enactment for the purpose will embrace the following provisions.

I. Regulation 1 of 1805 is hereby repealed, an Excise not exceeding one Rupee per maund will be levied in future on all Salt procured from Sea water.

II. All persons desirous of manufacturing Salt obtained from Sea water, are at liberty to do so on application to the Collector of the district in which the lands to be so used are situated. Such applications will be complied with, provided it is shewn to the satisfaction of the Collector, that the applicants have the means of carrying on the manufacture to the extent applied for; and provided further, that the land required is not so situated as to render it difficult to make suitable arrangements for the protection of the revenue.

III. The duty provided by this Act will be levied on the land occupied for the manufacture of Salt as aforesaid, or on the article itself, at the option of the owners of the said lands, provided both systems shall not be allowed to obtain in the same locality, so as to interfere with the protection of the revenue.

IV. *First.* When the duty is fixed on the land, the probable out-turn of Salt of the said land shall be estimated, and the duty shall be so fixed that it may not exceed the rate of one Rupee per maund of the manufactured article.

Second. The mode of fixing the duty under this Section shall be left to the Collector of the district, under the orders of the Board of Revenue. It will be optional with the ruling authorities to fix a certain sum which shall be levied on each bed or Salt Pan, or to make over a set of beds or Salt Pans, or a given tract of land required for the purposes of this Act, for a consolidated amount.

Third. The duty authorized by this Section shall be levied by instalments, to be fixed by the Collector of the district under the orders of the Board of Revenue.

Fourth. Where duty is levied in the manner authorized by this Section, there shall be no interference on the part of

the authorities of the district, as regards the manufacture and sale of Salt in such cases, except, when it may be necessary to attach the land or the salt, its produce, or both, for the security of the revenue.

V. *First.* When the duty prescribed by this Act shall be levied on the article after manufacture, all such Salt shall be brought from the Pans, as soon as it is made, to Platforms, or other places or buildings prepared for storing Salt. All Salt thus stored shall remain under the custody of the Government Officers till the same is sold. At the time of sale, and before the Salt is actually made over to the purchaser, the duty prescribed by this Section shall be collected.

Second. It shall be optional with the owners of Salt stored under this Section, to sell the same on their own account or to make it over to Government at the time of its being received into store, for a fixed price, to be regulated by the Collector of the district under the orders of the Board of Revenue, provided both arrangements shall not be allowed indifferently for Salt on the same Platform or place of store.

Third. Places of Store will be prepared by Government for Salt referred to in this Section.

VI. The minimum quantity of Salt for which a place of store shall be constructed by Government, shall be fixed by an order in Council, and land shall not be allowed for the manufacture of Salt, where places of store are required, unless the produce of such land shall be equal to the minimum so fixed. Where the duty is leviable on the land, a minimum of Salt to be manufactured in any locality shall not be required.

19. The foregoing are the main provisions connected with the substitution of an Excise for the present Monopoly. The land, as well as the manufactured article, will be declared liable to attachment and sale for arrears of revenue; illicit transactions will also be punishable; passes and rowanahs, to cover the Salt in transit, which are always open to much oppression, and abuse, will be altogether abolished;* subsidiary rules for the management of the department will be framed, as at present, under the orders of the Board of Revenue.

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* NOTE.—Merchants taking a whole heap without measurement are allowed 5 per cent. discount, which is supposed to cover wastage. This, as well as the minimum quantity to be sold to retail dealers, is properly provided for in the subsidiary rules.

20. Under the Monopoly there is great scope for illicit practices: these consist either in the clandestine removal of Salt to the dwellings of the manufacturers, or in sales, by the public servants, which are not brought to account. It may be said that these practices, with occasional exceptions, have not been carried on to any extent for some time past. Under an Excise, as above suggested, penalties must be provided against clandestine manufacture, clandestine removal of Salt from one set of Pans to another, and clandestine sales.

21. The amount of Excise to be fixed is a very important point. The working of the Monopoly, at the different rates of price which have prevailed from its commencement in 1806-07 to 1847-48, was reviewed in a letter to Government, dated 4th July 1850. In that communication, the Board observed that the greatest sales of Salt took place when the monopoly price was at Rupees 70, viz. from 1821-22 to 1826-27; but that a former Board, in 1828, considered that the increase was altogether irrespective of price and was to be traced to greater efficiency in the management. The price was raised to Rupees 105 per garce in 1828, and continued at that rate for 15 years, during which period, the sales were less than when the price was at Rupees 70 per garce. In 1843-44 the price was Rupees 180 per garce, but since the last mentioned year to the present time, the monopoly rate has been at Rupees 120 per garce, or 1 Rupee per maund. Great improvement has taken place latterly, so much so, that the sales during the last two years* have reached the standard when the price was at Rupees 70 per Garce.

22. In the Proceedings of the Board noticed in the foregoing para., it was pointed out that the combined Home and Inland sales were 564 garces† below what ought to be the quantity sold for Home Con-

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* Sales, exclusive of Export by Sea.

	Garces.
1825-26 at Rupees 70	42,810
1851-52 at „ 120	43,185
1852-53 at „ „	42,754

† Average sales of the 3 years from 1845-46 to 1847-48.

	Garces.
Home Sales	19,133
Inland do.	18,931
	38,064
Estimated consumption at 6 Measures per Head	37,500
	564

sumption alone, supposing the entire population, consisting of 20 millions of persons, to consume Sea Salt. It was further observed, that taking individual consumption at 6 measures, or 18lbs., per person, per annum, a family of six persons would require 36 measures or 4½ mercals, the value of which at Rupees 120 per garce would be Rupee 1-5-7, but that, as cost of transport and merchants' profits have to be added to this, it was clear that Sea Salt must be beyond the reach of many in the interior.

23. The great improvement in the internal communications of the country, as well as efficient control, has no doubt caused the increased sales during the last four years, but the fact that the quantity consumed is greatly disproportionate to the quantity that *ought* to be consumed, should chiefly guide us in determining what the amount of excise should be. The Mofussil officers generally, though in favor of the present form of Salt administration, advocate reduction of price, provided that what is given up is not made good by taxation in another shape. Railways will afford a two-fold benefit, first, a reduction of the cost of transport, and secondly, an increased facility to purchase in consequence of an improved condition of the people, but still the broad fact that Sea Salt, with all these advantages, must be beyond the reach of many, remains. It seems desirable therefore that the present Excise of 12 Annas per maund on Foreign Salt should be adopted for Home Salt, thus reducing the present Monopoly rate of 1 Rupee per maund, 25 per cent.

24. Inland Depôts have been established with benefit to the people in the districts of Canara and Malabar; but the system is expensive to Government and is attended with a considerable wastage of Salt. It seems better to reduce the Government duty and to leave the inland supply to the ordinary Trader. As Railways come into operation, and a certainty will be afforded that Salt, purchased for a remote inland destination, will not be disposed of at intermediate places, it will be easy, if it is then considered desirable, to reduce the Excise duty on such Salt to such extent as the exigency may require.

25. There should be a clause in the new Act giving the Governor in Council power to bring the Excise gradually into operation in each district, to insure an adequate supply of Salt during the transition from one system to another.

REVENUE BOARD OFFICE,
Fort St. George,
10*th* *April*, 1854.

J. GOLDINGHAM,
Second Member, Board of Revenue.

R.

Minute of E. Maltby, Esq., Third Member of the Board of Revenue, on Salt Revenue.

As the details of the system for conducting the manufacture and sale of Salt in the Madras Presidency on account of Government are fully described in the Board's Precis, and the time allowed me for this Minute is short, I shall limit myself to a few observations to shew how far the opinions recently expressed by me in my character of Collector of South Arcot regarding an Excise or Monopoly, have been modified by reading the reports of the other Collectors.

2. If it is intended to fix an Excise duty which will maintain the price of Salt at the present Monopoly rate, and an option had been given, I should have preferred continuing the present system. My reasons are these; *first,* the interest of the consumer will not be advanced by a change to an excise, unless the duty is modified, and there will be little inducement to private individuals to engage newly in the manufacture; *second,* the present system is generally satisfactory to the Meerassidars or proprietors of the Salt Pans, and under it, attention has been paid to the rights of numerous holders of hereditary Offices and Roosooms, whose claims will have, in some instances, to be re-opened and re-adjusted if a change takes place; *third,* a mere alteration of system seems unadvisable in itself on account of the difficulties and embarrassments by which it must at first be accompanied, and any unavoidable change is to be especially deprecated when a large amount of revenue is at stake, and the interests of the community are not advanced. *Fourth,* Our Conventions with the French Government oppose obstacle to a change.

3. It having, however, apparently been decided to make the change to an Excise in order that Government may be entirely unconnected with the manufacture and sale, the above remarks are recorded merely to shew my sentiments, and I proceed to offer observations on the manner in which the alteration can best be effected. My opinion is in favor of the excise system now in force at Bombay, as most resembling our own; and I think that it might be introduced without much difficulty, provided caution is used not to make the transition too abrupt, and measures are taken to give encouragement to the Meerassidars and induce them to continue the manufacture. These persons are seldom men of such capital as to be able to wait long for a return for their outlay and labour in making the Salt, and they would be apt to be alarmed at the novel responsibility of having to sell it themselves. Unless therefore precautions are taken

to inspire them with confidence, such as making them occasional loans or advances on the security of the Salt, they might be discouraged at first from continuing the manufacture.

4. It may here be observed, parenthetically, that the present time has one great advantage for trying the change. Government lately ordered that a supply of Salt equal to two years' cousumption should be kept on hand whenever practicable, and the past season has been so favorable to the manufacture, that this order will be carried into execution either fully or to considerable extent. There will consequently be a large stock of Salt on hand to supply any deficiency which may arise from the doubts of the Meerassidars at the first change of system.

5. Under the Bombay Salt laws,* the Government revenues are defended by stringent restrictions and severe punishments.—For example, no Salt works can be established without the previous sanction of Government, by whom they can also be suppressed in certain cases, the Salt must be stored in particular places under the inspection of Government Officers, and its removal, without a pass, subjects it to confiscation, while all parties infringing the Salt rules are liable to fine and imprisonment. Whatever objections may be made on abstract grounds to these rules, they appear to me indispensable, so long as the necessities of the State require the realization of a revenue far exceeding the intrinsic value of the article upon which it is raised. It may be a matter of regret that the privilege of manufacturing Salt is not open to all parties in all places, and that the transit of Salt should be encumbered by a system of passes or rowanahs. But as long as the wants of Government require the realization of a large revenue from Salt, it is useless to attempt collecting that revenue without taking means to limit the expense of the Salt establishments and prevent smuggling, for which purposes it appears to me that we cannot dispense with the rules requiring passes, and limiting the manufacture to places approved by Government.

6. In reference however to passes or Rowanahs, the old Madras rules, which under recent orders of the Board of Revenue have been much relaxed, might be modified. It seems to me absolutely necessary that all Salt under conveyance in the neighbourhood of Salt works should be liable to confiscation if not covered by a pass, but it might be sufficient to declare, that traders must, on demand, shew their passes to any Government Officer within the fixed range, instead of requiring them to go and deliver them up to the nearest authority. By this arrangement the evils attendant on Rowanahs would be materially de-

* Acts XXVII. of 1837 and XXXI. of 1850.

creased, while there would still be a check on the illicit removal of Salt and on the conduct of the Government servants on duty at the Depôts. The circle round the Salt works within which passes should be required, might be fixed at 30 miles, as bandies or cattle laden with Salt could hardly perform that distance within one night, and would therefore have to halt during daylight in a place where they would be exposed to scrutiny, and to which they could be followed on any attempt at smuggling being discovered.

7. The import duty upon which foreign Salt is now admitted into India being 12 Annas per maund, or 90 Rupees per garce, I presume that the excise duty would be about that sum until the import duty is altered. In this case I should not anticipate that the retail price would be much, if at all, reduced to the consumer, for although Salt can be taken out of the pans in some places at 6 and 7 Rupees per garce, the expense of storing and thatching it, the risk to the manufacturer from accidents of season, the loss by wastage, and the interest of the capital employed until the Salt is sold, are to be considered. The advantage of the change would therefore be confined to securing an important branch of revenue from the attacks which the name of Monopoly has brought upon it in Parliament. In other respects the change would not diminish the expenses of management, or (in my opinion) the price of the article, while it would at first lead to embarrassments and render the supply of Salt for the consumption of the community less certain.

8. But if the excise duty was so fixed as to lower the cost of the article, I should regard the change from a Monopoly to an Excise with hopeful anticipations, both as respects the interests of Government and those of the people. The public accounts shew, that consumption has been checked, notwithstanding an increasing population, by raising the first Monopoly price of Rupees 70 to the present rate; and if the price was lowered, the demand for Salt would again extend and the manufacturers be encouraged in their operations by a brisk and easy sale. I should then too expect that men of capital would undertake Salt works either singly or in companies, and by the scientific means which they would employ and the beneficial aid of the railway and new roads, the price of Salt would be so diminished to the inland consumer as to extend the demand and thus prevent loss to the revenue. The manufacture of Salt is so uncertain and so liable to be destroyed by rain, that capitalists would, it appears to me, be deterred from engaging in it, when, in addition to this risk, an excise duty of Rupees 90 must be paid before the Salt can be taken off their hands.

9. One peculiarity in the Madras Salt system is, that each set of pans is divided among so many individuals in minute parcels that some

proprietors manufacture less than a garce, and it seems necessary to keep this circumstance in view in arranging the change to an excise. The platforms on which the Salt is stored are limited in extent, being raised with some labour and expense in the ground adjoining the pans, which, from its low situation, is subject to inundation. If each proprietor's small stock of Salt was therefore to be stored separately, much additional expense would be incurred in extending the platforms, and employing extra servants to guard them. I would therefore propose that the system of storing the Salt in 10 garce heaps be continued, and the several small proprietors to whom a single heap jointly belonged, could elect among themselves an individual to represent them in disposing of the Salt—as the quantity contributed by each to the heap would appear in the Depôt accounts, disputes would seldom occur and be easy of settlement.

10. It may be remarked that one probable result of introducing the Excise system would be the abandonment of the inferior pans in which Salt of a secondary description can alone be produced. Under the Monopoly, all descriptions of Salt are sold at the same price, but it will not be so under an excise, though one uniform duty will be levied, and the inferior pans will therefore gradually give way to the rivalry of the superior. One class of proprietors will consequently find their interests affected by the change; but the Salt consuming public will gain, and as the result is the inevitable consequence of open competition, it is not to be regretted, and the protection hitherto afforded to the producers of an inferior article may be considered sufficient compensation to them for the future interruption of their extra gain.

11. A system of licences or accepting offers for renting sets of pans at a fixed annual sum, has occupied my thoughts, and it seems to me desirable to invest the local Government with power to enter into such arrangements. It would, however, be necessary to act with much caution so as not to give an advantage over those who manufacture Salt under a fixed excise duty. I agree with the Second Member that the two systems should not prevail at the same station or in the same neighbourhood.

12. The subject of an assessment or land tax on the area of the Salt pans has also occupied my attention; but such an arrangement seems impracticable for two reasons. First, the impossibility of ascertaining the ordinary produce per cawny or acre, so as to fix the tax in a manner which would be just to Government, and the proprietor of the pan. Secondly, if a revenue equivalent to or approaching the present amount is to be raised, the land tax per cawny must be so enormous, that only men of capital could undertake the manufacture, and they would be deterred from entering upon an expensive undertaking, in which

there is always a risk of the produce being suddenly destroyed by rain. To shew how the rates of produce vary in consequence of difference of soil and other causes, I may mention that when measures were being taken to extend the Teagavully pans in South Arcot,* the produce per cawny was estimated at 6 garces, while at Mercanum, in the same district, it extends to 30 garces in favorable seasons, and has averaged 16 on some resumed Pagoda pans under Sircar management. If a mean of 10 garces was taken, an excise duty at the present import rate of 12 Annas per maund, would amount to Rupees 900 per Cawny, and I should doubt the proprietors of the pans being willing to assume the responsibility of paying such an assessment.

13. It is known that Earth Salt is manufactured in large quantities in the inland districts; and as more extended experience and scientific analysis refute the idea of its being unwholesome, the time appears to have arrived for legalizing its manufacture, which is now only permitted in some places. A contraband trade would thus be stopped, and just protection afforded to those who have to manufacture Sea Salt under a heavy excise duty. It appears therefore advisable in introducing an excise, to consider what rate of duty may be fixed respectively on Sea and Earth Salt. After the excise duty on the former has been settled, the rate for the latter should be so fixed as to prevent its having a preponderating advantage over the rival article. In our Southern Provinces, the Earth Salt clandestinely introduced from the small independent State of Poodoocottah, injuriously affects our Salt revenue.

14. The last point to which I shall advert are the difficulties offered to a change of system by our Conventions with the French Government. Under the Treaty executed at London in 1815, the French Government agrees, not to trade in Salt, but to deliver to us all that it manufactures in excess of the wants of its Indian Possessions, on receiving from us an annual payment of 4 lacs of Sicca Rupees; and this Agreement is declared by Article X. to be permanent until dissolved by "the mutual consent" of both contracting parties. The second Convention is a local one (executed in 1818 and renewed in 1837) between the Government of Madras and Pondicherry, arranging that the pans in the French limits are not to be worked, we supplying the French authorities with Salt at its prime cost, and paying them Rupees 14,000 annually, as compensation to the owners of the suppressed pans. This Treaty can be terminated at the wish of either party on giving 12 months' notice. It is sufficient for me to invite attention to the first of these Conventions which will doubtless undergo due consideration when the pro-

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* See Diary of Civil Engineer 5th Division for March 1851.

posed change in the Salt system is being carried out. With regard to the second, I may observe, that it is decidedly our interest to keep it in force, if practicable, after the change to an excise, and I conceive that this might be done by our arranging with the Salt manufacturers in South Arcot to purchase from them the Salt required by the Pondicherry Government, and delivering it at the same price as heretofore. The French and English Villages are so intermingled, and the Frontier is so intricate and ill defined, that if Salt was manufactured in the French limits, it could easily be smuggled into our territory, to the injury of our Meerassidars and the loss of our revenue, and the evil would be greater from there being extensive tracts of ground fit for new Salt works in the Pondicherry limits in addition to the suppressed pans. As the French Government derive a considerable revenue from the Salt with which we supply them, by selling it at our Monopoly price, they would probably be willing to continue the Convention, only altering their selling price to such a rate as would equal the current price in our districts under our new excise system.

15. Although I have not deemed it necessary to enter into detail on the subject, I consider it requisite that the revenue under a system of Excise should be protected by the same penalties which are now in force for various breaches of the Salt Regulations in the Madras and Bombay Presidencies.

REVENUE BOARD OFFICE,
Fort St. George,
24th June, 1854.

E. MALTBY,
Third Member, Board of Revenue.

S.

No. 78.

FROM

WILLIAM KNOX, ESQ.
Acting Collector of Ganjam.

To

W. H. BAYLEY, ESQ.
SECRETARY TO THE BOARD OF REVENUE,
Fort St. George.

SIR,

I have the honor to submit, in answer to your letter of the 11th March last, a few remarks on the subject of the introduction of

a system of Excise on Salt, instead of the present one. It is a subject of much difficulty, and one on which the records of the office throw but little light. Supposing that Government gives up the present Salt monopoly, the points to be considered may be divided into four.

I. How to ensure a constant and certain supply of this necessary of life.

II. How the interests of Government may be best consulted, and the revenue secured from loss.

III. How the public may be benefited by a reduction in the price: and

IV. How the rights of the present manufacturers may be best main tained.

These are the heads under which it appears to me, that the Despatch of the Honorable the Court of Directors may be reduced for more easy reference,* and I propose now to take them in order.

2. The first question then is one of supply. Were the wants of this district only to be consulted, there would be but little difficulty, situated close to the Sea, with many places well fitted for Salt pans, a very large quantity might be readily produced. It appears from the old records, that there were, fifty years ago, many more pans than there are at present; there were then nine capable of producing Salt, as shewn below,† now only 4(a) are worked, and of these 4, Ganjam and Nowpada might be increased to a very great extent, probably doubled; there were formerly 3 platforms at Nowpada, there are now but two; the supply at present is not equal to the demand, and as will be seen in my letter to the Collector, dated 3d June 1852, sent to the Board with my letter of the 25th ultimo, No. 58, I long ago proposed to increase the Nowpada pans. The recent orders of the Board to have always 2 years' supply on hand, will render it imperative to increase the pre-

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* 5th October 1853, No. 3.

† Estimate of probable supply of Salt.

	M. G.
(a) Nowpada including a third platform,	3,000
(a) Womerivilly,	350
(a) Ganjam,	700
(a) Munsoorcottah,	50
Itchapore,	230
Bauvanapaud,	200
Hoomah,	600
Pauloor,	1,000
Birredy,	50
Total...	6,180

sent pans, and re-open that at Itchapore; but even this will not be enough, I expect, to meet the demand that will probably arise, when the various roads now in progress are opened through the Jeypore country.

3. If pans were opened at all the places where Salt can be made in the district, I feel satisfied that we could then supply all purchasers, and keep a good stock in reserve. I annex a list* of these pans, and the probable amount of Salt each would yield. The enquiries instituted by Mr. Fraser, whose report I expect daily, lead to conviction, that an immense quantity is made away with, and this I believe is the truth, so that if what is now smuggled is taken into the estimate, there can be no doubt of this district meeting all demands on it. In the note† I annex a memo.: of the greatest quantity of Salt made at each pan in any one year, which will also help to prove, that there is no fear of a short supply.

4. There being ample ground on which to crop Salt, the next thing to be considered is the way in which it may best be manufactured. I would propose to rent out each set of pans, the Contractor binding himself to make each year, not less than the average quantity required, and also to keep not less than one year's Salt in store; this, Government should take off his hands at a fixed rate, when his contract terminated, which should, I think, be every 5 years. The outlay required for the manufacture of Salt is by no means large. It costs Government less than 7 Rupees per garce, private individuals will produce it for less, so that a man of very moderate means, could rent a pan producing, say 200 garce, and from what I can learn, there would soon be a great competition among renters for these pans. Renting is not altogether new to this district. In A. D. 1801-2.‡ Womerivilly and Munsoorcottah were both rented out, the former for Rupees 4,500, but Mr. P. Cherry in the following year, took it under management, as mentioned in his letter to the Board of Revenue, dated 31st January 1804. Munsoorcottah was rented to Major Evans, the Superintendent of the Stud here, but I am unable to find what he paid for it, the rent is spoken of by the Board§ as trifling. Another plan would be to assess all land capable of yielding Salt, but there are many objections to it.

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* No. 1.

		Garce.
† Ganjam in Fusly	1245,	1171
Munsoorcottah, ,,	1242,	419
Itchapore, ,,	1233,	635
Nowpada, ,,	1256,	2584
Womerivilly, ,,	1246,	1615

‡ To Board 26th October 1802.

§ From Board of Revenue to Government 6th April 1810, Para 15.

Salt must be made by a number of persons working together under some common head: no single ryot could afford to open the bars and channels, unless he worked on a very large scale, and the difficulty of realizing the heavy kists, would be very great, and there would be no means of securing a reserve, to meet a failure of the crop. The third expedient, viz., to levy an excise on all Salt, and allow any one to make it, would require far too costly an establishment to realize the duty, ever to make it worthy of consideration.

5. As regards the interests of Government, the system of renting out the pans will, I conceive, be the most advisable. Government will realize the revenue at a very small cost, as the expenses of manufacture and watching, will all devolve on the Renter; all that would be necessary, would be, a Gomastah at the Hoozoor station, to keep the accounts, and an Inspector, to move about from pan to pan to see that the Salt was made according to contracts, and that a sufficient supply was always in store. If this be attended to, and proper security taken in the first instance, no loss could accrue to Government in this district.

6. I have not had any experience in the Salt department, except in Rajahmundry: there too, there are large plains to the South of Moyalloor, where extensive Salt works could be established, and from which, I, when an Assistant in the District, collected one very dry season, a large quantity of Spontaneous Salt, which was eagerly bought up by the Brinjarees.

7. In Cuddapah Proper, and in the Sub-division, there used to be, I dare say there now is, a large clandestine manufacture of Earth Salt for cattle, which was said to interfere much with the sales at Nellore, this I would propose to legalize, giving a licence for its manufacture on the same terms as Sea Salt; it is very difficult to stop the manufacture, and it is only fair to the producer of Sea Salt, that it should be protected.

8. I believe too that by throwing open a large number of new pans, and reducing the rate of duty on the article, there would soon be a surplus revenue—the increase of the cultivation of the Poppy in Bengal is a strong argument in my favor. It has been invariably found, that high duties encourage smuggling. The successful result of lowering the excise on whiskey in Ireland, is a case in point, though not quite parallel, for the Salt smuggler is generally, I regret to say, assisted by the Government servant, who ought to stop him. The temptation is too great to be withstood—whereas were a licence given, the Renter would look closely after his own interests, and prevent, in a great measure, clandestine sales.

9. We come now to consider how this very necessary condiment may be supplied to the public at the lowest rate compatible with the security of the Revenue, and, what is of great consequence, without risk of scarcity. The system of licencing seems to me to afford the best means of obtaining the end desired; there would perhaps be at first a deficiency in the revenue, probably a large one; but I would look to a large increase of consumption to make up for this. That there would be this increase were the Salt sold at lower rates, there can be no doubt. I annex a memo.* shewing the amount of Salt sold and the selling price. You will remark, how, when the price is raised, the quantity of Salt sold, diminished in a most marked manner. In Fusly 1237 there were 3,272 Madras garce of Salt sold at 70 Rupees per garce; next Fusly, 2619 at 105 Rupees; in 1253, when the price was again raised, it was only 2,210 garce—in the last years at which it was sold for 70 Rupees, viz., from Fusly 1232 to 37, the average sales were Madras garce 3,254; after a lapse of twenty years, the sale for 5 years, viz., from Fusly 1258 to 62 they were only 2727 Madras garce. There can be no doubt that the inland exportation will increase to a very great extent with every new road made through the hills into Jeypore and the adjacent countries. The cost of production would be much less to the private manufacturer, every available spot being made over to some renter, there would be less opening for producing the article by smugglers, and, as already remarked, the watch over the pans being stimulated by self-interest, would be much more vigilant than it now is under servants paid by the month, and that very insufficiently. The Salt at different pans being of different qualities, the Renters would be, in some degree, checked from entering into a combination to keep up prices, for I expect that the Renters of the new Cotaurs and of Womerivilly, will have to sell at lower rates than at Nowpada, to attract purchasers—their Salt being inferior. It would doubtless be requisite to fix a maximum price above which salt was not to be sold, this should be fixed so as amply to remunerate the producer, and yet not press heavily on the consumer.

10. I will not venture an opinion on the subject of the import of Salt by Sea with which I have had nothing to do, and which is not likely to interfere with the sales of Salt up-country, whatever may be the case at the Presidencies; but of course Government will fix the Sea Customs import duty, so that there may be no great difference between the two Sales.

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* No. 2.

11. I would propose in the first instance, to fix the highest price at which Salt could be sold at the pans, at Rupees 70 per garce—Government offering the pans at an upset rent, say of 60 Rupees a garce—thus a pan that now yields on an average 200 garce, should be rented for 12,000 Rupees payable in 9 monthly kists from December to August—the Renter making his profit on the Salt made in excess of this, rather than on the quantity estimated for. I have already shewn my grounds for expecting this increase.

12. There cannot be any question as to the advantage to be derived to the public from this plan: the general supervision exercised by Government would ensure a regular and never-failing supply of an unadulterated article, the quantity made, and the competition, would ensure the consumer's obtaining it at a fair rate. Salt is now selling in this district at 7 pice per seer, a reduction so as to enable the retail dealer to sell it at 75 Rupees a garce would bring the price down to 3 pice or 1 anna 9 pice per man, allowing the average consumption to be 7 seers per annum—this would not be a heavy impost even on the poorest. I find from the old records, that in 1802, the price was 2 pice and 80 cents for a seer, or 1 anna 7 pice and 60 cents per man, per annum.

13. The last point to be considered is the rights of the present holders, and the protection to be given the renters. I would allow the former the same rights they have now, that is, to make the salt at a fair rate per garce; in some pans this rate is too high, perhaps, but probably not, when the ryots would be prevented from smuggling at the rate they now do. But if disputes arise, let them be settled by a Punchayet with an appeal to the Collector, whose decision should be final; persons found guilty of smuggling, or neglecting to make Salt, to be liable to lose their right of manufacture.

14. Having reduced the price of the article and increased the manufacture, I would not hesitate to make the penalties for smuggling greater than they now are—petty cases might be dealt with under Regulation I. of 1820, and larger offences under the rules now in force. The reward of one-third of the value should in all cases be given to parties making seizures of smuggled Salt, and police or revenue officers proved to have neglected to give active assistance, might be treated as aiding and abetting the smuggler; this, and the incitement of personal interest, would soon check the system now in vogue. Lastly, to ensure the Renter from loss, and to make it better worth his while to keep up his reserve, the in-coming Renter, in the event of a farm changing hands, should be obliged to take the stock in hand, at the maximum rate, whatever may be fixed by Government.

15. I regret much that this letter has been so long delayed—the subject is one that requires thought and consideration, and I have had but little leisure to give to it—the current duties of this office, increased by the work of the Assistant's Office having, in Mr. Fraser's absence, devolved on me, will, I trust, be taken as a valid excuse.

I have the honor to be,
Sir,
Your most obedient servant,
W. Knox,
Acting Collector.

Ganjam District,
Collector's Cutcherry,
Chutterpore, 26*th May*, 1854.

List No. I. referred to in Para. 3 *of the above letter.*

Names of the Cotaurs.	Names of the Villages where Salt is Manufactured.	Probable amount of Crop or Average—Gross Produce in Madras Garce.			
		Madras Garce.	Mls.	M.	
Hoomah,......	Tolah Hoomah, - -	595	230	0	Referred in Mr. Cherry's letter to Board of Revenue 31st Jany. 1804.
Pauloor,...	Prayagah and Poorivah Coodah, - - -	100	266	0	
	Collarabary and Bramaracoodee, - - -	77	101	4	
	Beempoor and Lutchmanavoor, - - -	74	320	4	
	Sautapooty, - -	3	99	0	
	Sauntoo Addane Village, -	2	280	0	
	Moherry Coodah, -	257	186	4	
	Gokooroo Coodah, - -	290	280	0	
	Puncha Coodah, - -	198	225	0	
Birredy,..........	Modooreochoovah and Decandee, - - -	37	216	4	
	Rumbah, - - -	13	200	0	
Itchapore,....		227	210	0	
Bawanapaud,.... ...		200	0	0	
Stree Koormam,...		61	0	0	in 1817
Megavarem,.........		200	0	0	
	Total...	2,340	215	0	

No. 2.

Particulars of Salt Sales.

Fuslies.	Home and Inland Consumption.								Exported to Bengal by Sea.							
	Quantity of Salt.				Rate per Madras Garce.	Amount of Value.			Quantity of Salt.				Rate per Madras Garce.	Amount of Value.		
	M. Garce.	Mercals	P.	A	Rups.	Rups.	A.	P.	M. Garce.	Mls.	P.	A.	Rs.	Rups.	A.	P.
Fusly 1215...	1,917	111	0	3	70	1,34,227	10	11	46	200	0	0	24	1,116	0	0
,, 1216...	1,877	144	2	4	70	1,31,416	4	7	0	0	0	0	0	0	0	0
,, 1217...	1,638	268	5	1	70	1,14,709	15	7	0	0	0	0	0	0	0	0
,, 1218...	1,839	223	5	3	70	1,28,770	13	1	111	320	0	0	0	911	4	2
,, 1219...	688	79	2	3	105	70,301	8	8	0	0	0	0	0	0	0	0
,, 1220...	1,416	361	1	3	105	1,48,776	15	9	90	396	5	3	24	18,983	12	9
,, 1221...	1,602	4	5	5	105	1,68,219	4	2	105	0	0	0	24	2,520	0	0
,, 1222...	1,514	13	4	2	105	1,58,973	3	7	427	366	5	2	24	4,138	0	0
,, 1223...	1,249	117	4	2	105	1,31,175	13	1	111	55	0	0	24	1,611	4	9
,, 1224...	2,124	197	1	3	105	2,23,071	12	10	117	0	0	0	24	2,808	0	0
,, 1225...	2,113	342	5	6	105	2,21,954	15	4	91	0	0	0	24	2,184	0	0
,, 1226...	1,514	2	6	4	105	1,58,970	14	6	0	0	0	0	0	0	0	0
,, 1227...	1,624	344	4	2	105	1,70,610	10	4	0	0	0	0	0	0	0	0
,, 1228...	1,975	312	7	7	105	2,07,457	1	8	0	0	0	0	0	0	0	0
,, 1229...	1,562	140	2	7	105	1,64,039	15	11	0	0	0	0	0	0	0	0
,, 1230...	2,164	326	4	0	70	1,51,537	2	9	0	0	0	0	0	0	0	0
,, 1231...	2,551	391	7	0	70	1,78,638	9	5	0	0	0	0	0	0	0	0
,, 1232...	3,308	327	7	6	70	2,31,617	11	0	0	0	0	0	0	0	0	0
,, 1233...	3,235	215	2	2	70	2,26,487	10	10	0	0	0	0	0	0	0	0
,, 1234...	3,418	69	5	0	70	2,39,272	3	1	0	0	0	0	0	0	0	0
,, 1235...	3,160	320	2	0	70	2,21,256	0	9	0	0	0	0	0	0	0	0
,, 1236...	3,131	330	3	0	70	2,19,227	13	9	0	0	0	0	0	0	0	0
,, 1237...	3,272	352	5	0	70	2,29,101	11	6	0	0	0	0	0	0	0	0
,, 1238...	2,619	370	7	5	105	2,73,976	0	0	0	0	0	0	0	0	0	0
,, 1239...	2,659	330	2	1	105	2,78,941	12	1	0	0	0	0	0	0	0	0
,, 1240...	2,799	107	1	1	105	2,93,873	4	0	0	0	0	0	0	0	0	0
,, 1241...	2,426	323	6	1	105	2,54,815	0	11	0	0	0	0	0	0	0	0
,, 1242...	2,409	30	5	0	105	2,52,953	0	1	0	0	0	0	0	0	0	0
,, 1243...	3,151	172	7	4	105	3,30,903	0	3	0	0	0	0	0	0	0	0
,, 1244...	2,747	335	6	1	105	2,88,523	2	4	0	0	0	0	0	0	0	0
,, 1245...	2,389	74	6	5	105	2,50,864	10	7	0	0	0	0	0	0	0	0
,, 1246...	2,493	94	7	5	105	2,61,790	1	0	0	0	0	0	0	0	0	0
,, 1247...	2,720	241	6	7	105	2,85,663	10	3	0	0	0	0	0	0	0	0
,, 1248...	3,094	308	4	3	105	3,24,951	1	9	0	0	0	0	0	0	0	0
,, 1249...	2,751	220	3	7	105	2,88,912	13	9	0	0	0	0	0	0	0	0
,, 1250...	2,269	34	1	6	105	2,38,253	15	10	0	0	0	0	0	0	0	0
,, 1251...	2,499	160	0	0	105	2,62,437	0	1	0	0	0	0	0	0	0	0
,, 1252...	2,807	189	6	0	105	2,94,784	13	1	0	0	0	0	0	0	0	0
,, 1253...	2,210	300	0	7	105 / 180	2,54,551	6	7	0	0	0	0	0	0	0	0
,, 1254...	2,496	206	4	2	180 / 120	3,02,755	0	0	0	0	0	0	0	0	0	0
,, 1255...	2,299	355	5	0	120	2,75,986	11	0	0	0	0	0	0	0	0	0
,, 1256...	2,277	263	1	0	120	2,73,318	15	0	0	0	0	0	0	0	0	0
,, 1257...	2,402	58	1	0	120	2,88,257	7	0	0	0	0	0	0	0	0	0
,, 1258...	2,292	299	1	2	120	2,75,129	12	0	0	0	0	0	0	0	0	0
,, 1259...	2,400	201	3	3	120	2,88,060	7	0	0	0	0	0	0	0	0	0
,, 1260...	2,399	134	1	1	120 / 114	2,86,660	4	0	0	0	0	0	0	0	0	0
,, 1261...	3,393	23	2	5	120 / 114	3,98,467	9	0	0	0	0	0	0	0	0	0
,, 1262...	3,152	259	3	7	120 / 114	3,68,417	13	7	0	0	0	0	0	0	0	0

CHUTTERPORE,
26*th* *May*, 1854.

W. KNOX,
Acting Collector.

T.

Convention between Great Britain and France, signed at London on the 7th March 1815.

TRANSLATION.

IN THE NAME OF THE MOST HOLY AND UNDIVIDED TRINITY.

The Trade in Salt and Opium throughout the British Sovereignty in India, having been subjected to certain Regulations and Restrictions, which, unless due provision be made, might occasion differences between the Subjects and Agents of His Britannic Majesty and those of His Most Christian Majesty, their said Majesties have thought proper to conclude a Special Convention for the purpose of preventing such differences, and removing every cause of dispute between their respective Subjects in that part of the World, and in this view, have named for their respective Plenipotentiaries, viz., His Majesty the King of the United Kingdom of Great Britain and Ireland, Robert, Earl of Buckinghamshire, a Peer of the United Kingdom, one of His Majesty's Most Honorable Privy Council in England and in Ireland, and President of the Board of His Majesty's Commissioners for the affairs of India—and His Majesty the King of France and Navarre, the Sicar Claude Louis de La Chatre, Descendant of the Princes of Deals, Count de La Chatre, Commander of the Royal and Hospitable Orders of Saint Lazarus and of Mount Carmel, Honourary Commander of the Order of Malta, Knight of the Royal and Military Order of Saint Louis, Lieutenant General of His Armies, and His Ambassador Extraordinary and Plenipotentiary at the Court of London—who after having communicated to each other their respective full powers, found in good and due form, have agreed upon the following Articles.

ARTICLE I.

His Most Christian Majesty engages to farm to the British Government in India, the exclusive right to purchase, at a fair and equitable price to be regulated by that which the said Government shall have paid for Salt in the districts in the vicinity of the French Possessions on the Coasts of Coromandel and Orixa respectively, the Salt that may be manufactured in the said Possessions, subject, however, to a reservation of the quantity that the Agents of His Most Christian Majesty shall deem requisite for the domestic use and consumption of the inhabitants thereof, and upon the condition that the British Government shall deliver in Bengal to the Agents of His Most Christian Majesty the quan-

tity of Salt that may be judged necessary for the consumption of the inhabitants of Chandernagore, reference being had to the population of the said Settlement,—such delivery to be made at the price which the British Government shall have paid for the said article.

ARTICLE II.

In order to ascertain the prices as aforesaid, the official accounts of the charges incurred by the British Government for the Salt manufactured in the districts in the vicinity of the French Settlements on the Coasts of Coromandel and Orixa respectively, shall be open to the inspection of a Commissioner to be appointed, for that purpose, by the Agents of His Most Christian Majesty in India, and the price to be paid by the British Government shall be settled according to an average, to be taken every three years, of the charges, as aforesaid, ascertained by the said official accounts, commencing with the three years preceding the date of the present Convention.

The price of Salt at Chandernagore to be determined, in the same manner, by the charges incurred by the British Government for the Salt manufactured in the districts nearest to the said Settlement.

ARTICLE III.

It is understood that the Salt Works in the Possessions belonging to His Most Christian Majesty shall be and remain under the direction and administration of the Agents of His said Majesty.

ARTICLE IV.

With a view to the effectual attainment of the objects in the contemplation of the High Contracting Parties, His Most Christian Majesty engages to establish in His Possessions on the Coasts of Coromandel and Orixa, and at Chandernagore in Bengal, nearly the same price for Salt as that at which it shall be sold by the British Government in the vicinity of each of the said Possessions.

ARTICLE V.

In consideration of the Stipulation expressed in the preceding Articles, His Britannic Majesty engages that the sum of Four* Lacs of Sicca Rupees shall be paid annually to the Agents of His Most Christian Majesty duly authorized, by equal quarterly instalments, such instalments to be paid at Calcutta or Madras, ten days after the bills that

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(* NOTE.—Besides this we pay them 14,000 Rupees a year as compensation for giving up their *own* Salt Pans—allowed them by Article 3. W. H. B.)

may be drawn for the same by the said Agents shall have been presented to the Government of either of those Presidencies, it being agreed that the Rent above stipulated shall commence from the 1st of October 1814.

* * *

Done at London this 7th day of March in the year of Our Lord one thousand eight hundred and fifteen.

L. S. BUCKINGHAMSHIRE,
L. S. LE COMTE DE LA CHATRE.

(A true Copy.)

HOLT MACKENZIE,
Acting Secretary to the Madras Government.

Convention between the Governments of Madras and Pondicherry, signed at Pondicherry on the thirteenth day of May 1818.

With a view to carry into full and complete effect the object of those terms of the Convention between Great Britain and France signed at London on the 7th of March 1815, which regard the trade in Salt throughout the British Sovereignty in India, the following Articles have been agreed upon by His Excellency Andre Julien Count Du Puy, Peer of France, Great Officer of the Royal Order of the Legion of Honor, and Mr. Joseph Francois Dayot, Chevalier of the said Order, Administrators General of the French Establishments in India; and Captain James Stuart Fraser, Commissioner on the part of the British Government, for conducting the transfer of such of those Possessions as have heretofore been dependant upon the Presidency of Fort St. George.

ARTICLE I.

The manufacture of Salt shall cease throughout the whole of the French Establishments in India during the continuance of the Honorable Company's present Charter.

ARTICLE II.

The French Government guarantee the strict observance of the above Stipulation and the further adoption of all such measures as depend upon them for ensuring the effectual prevention of the contraband trade in Salt.

ARTICLE III.

The Madras Government engages to pay to the French Government, as an indemnification to the Proprietors of the Salt Pans, the sum of four thousand Star Pagodas per annum, during the continuance of the Honorable Company's present Charter, if this Convention be ultimately ratified.

ARTICLE IV.

The above stipulated sum of four thousand Star Pagodas per annum shall be paid by Quarterly Instalments and be considered to have commenced from the 1st January last.

ARTICLE V.

The Madras Government engages independently of further confirmation, to pay the sum of four thousand Star Pagodas to the French Government for one year from the 1st of January last, and to continue to fulfil the same engagement until the determination of the Supreme Government, or eventually, of the authorities in Europe, shall be officially notified to the French Government in India.

ARTICLE VI.

The British Government engages to deliver such a quantity of Salt as shall be requisite for the domestic use and consumption of the Inhabitants of the French Settlements in India, the purchase, delivery, and subsequent sale of the said quantity being regulated according to the Stipulations contained in Articles 1st, 2d and 4th of the Convention of the 7th March 1815.

ARTICLE VII.

The present Convention shall be ratified and exchanged with the least possible delay.

Done at Pondicherry this thirteenth day of May in the year of Our Lord one thousand eight hundred and eighteen.

JAMES STUART FRASER,
LE C^{TE.} DU PUY,
J. DAYOT.

Ratified by the Government of Fort St. George according to the

Terms of the fifth Article, this twenty-third day of May, in the year of Our Lord one thousand eight hundred and eighteen.

H. Elliot,
R. Fullerton,
R. Alexander.

By the Right Honorable
the Governor in Council.

G. Strachey,
Chief Secretary.

Convention between the Governments of Madras and Pondicherry for the renewal of the Convention of 13*th May* 1818; *concluded between His Excellency the Marquis de Saint Simon, Major General, Peer of France, Great Officer of the Royal Order of the Legion of Honor, Governor of the French Establishments in India; and John Dent, Esquire, Principal Collector of the Southern Division of Arcot.*

Article I.

The whole of the Salt Pans situated throughout the French Establishments in India shall continue in a state of inactivity as heretofore.

Article II.

The French Government guarantee the strict observance of the above Stipulation, and the further adoption of all such measures as depend upon them for ensuring the effectual prevention of the contraband trade in Salt.

Article III.

The Madras Government engages to pay to the French Government as an indemnification to the Proprietors of the Salt Pans, the sum of four thousand Star Pagodas per annum.

Article IV.

The above stipulated sum of four thousand Star Pagodas per annum shall be paid by Quarterly Instalments.

Article V.

The British Government engages to deliver such quantity of Salt as shall be requisite for the domestic use and consumption of the Inhabitants of the French Settlement, in India, the purchase, delivery and subsequent sale of the said quantity being regulated according to the Stipulations contained in the Convention of the 7th March 1815.

Article VI.

The expenses incurred for the transport of Salt having been hitherto borne equally by the English and French Governments, it is agreed that they shall continue to be so during the present Convention.

Article VII.

It shall be optional with either the English or French Government to withdraw from the present Convention on giving twelve months' previous notice.

Article VIII.

The present Convention shall be ratified with the least possible delay.

Done at Pondicherry this first day of June in the year of Our Lord one thousand eight hundred and thirty-seven.

(Signed) J. Dent,
Principal Collector.

Ratified by the Government of Fort Saint George this eighteenth day of July in the year of Our Lord one thousand eight hundred and thirty-seven.

By the Right Honorable
the Governor in Council,
H. Chamier,
Chief Secretary.

Elphinstone,
P. Maitland,
J. Sullivan.

U.

No. 1629.

From
J. J. Franklin, Esq.,
Secretary Marine Board.

To
Sir H. C. Montgomery, Bart.,
Chief Secretary to Government,
Fort St. George.

Sir,

Adverting to Extract from Minutes of Consultation of the 3d Instant, No. 637, and to the letter from the Marine Board of the 31st of

the previous month, therein read, noticing that there were several vessels in the Roads available for the conveyance of Salt to Calcutta if immediate steps were taken to secure them, I am now desired to state, that they have all sailed for Calcutta direct.

2. In making enquiries on the subject, the Board learned that there existed an objection on the part of traders to load Salt on account of Government, and that they preferred taking it on private account. It appears that when taken for Government, it has to be landed at a particular place called the Salt Golahs, not only at the expense, but at the risk, of the ship. The Salt is taken charge of by Government servants, and payment being made on their receipts, the per centage of loss on a cargo is invariably found to be more than when landed by private individuals. This is one objection. Another is, that Vessels have to undergo the risk and expense of two removals; the first to the Salt Golahs, the second back again to the ordinary moorings. No Vessel can be moored off Calcutta without having the Harbour Master or one of his Assistants on board.

3. When on the other hand Vessels take Salt on private account, they at once proceed to the berth they intend to occupy during their stay at the Port, thus escaping one removal. Purchasers weigh the Salt on board the ship, and remove it at their own expense and risk. The advantage is evidently on the side of the transport of Salt on private account, the more particularly as the price charged for it on this Coast under such circumstances is only fifteen Rupees per 100 Indian Maunds, while 25 Rupees is the cost of the same quantity when taken for Government, the difference in price being about equivalent to the average differences (so the Board understand) between the price given by the Bengal Government for the Indent Salt (60 Rupees) and the market price at Calcutta. Vessels loading on private account, therefore, avoid the risk, delay and expense, of moving twice in a river with a dangerously rapid current, as well as the loss on the out-turn, and the risk and expense of landing their cargo. Yet, with all these advantages, it is still seen, that there is not sufficient inducement for vessels to convey to Calcutta as much Salt as is required for that Presidency. The Board would suggest therefore that the cost of taking it in should be somewhat lowered, if only as an experiment, during such time as a scarcity of the article prevails at Calcutta.

MADRAS:
Marine Board Office,
7th June, 1854.

I have, &c.
JOHN J. FRANKLIN,
Secretary.

V.

Average selling prices of Salt per Garce.

A. D.	Fuslies.	Monopoly Rate.	Ganjam.	Vizagapatam.	Rajahmundry.	Masulipatam.	Guntoor.	Nellore.	Cuddapah.	Bellary.	Chingleput.	Madras.	N. Arcot.	S. Arcot.	Tanjore.	Salem.	Trichinopoly.	Madura.	Tinnevelly.	Malabar.	Coimbatore.	Canara.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1816–17	1226	105	139	121	151	153	127	125	183	0	132	0	152	139	131	199	166	167	146	210	229	135
1817–18	1227	105	139	122	156	159	123	136	189	0	137	0	166	145	135	201	171	164	145	208	218	137
1818–19	1228	105	138	126	166	159	136	151	196	0	155	0	189	145	135	204	181	166	146	208	215	140
1819–20	1229	105	141	184	175	158	145	143	195	0	153	0	200	139	138	203	189	171	144	268	234	137
1820–21	1230	105 and 70	113	100	180	151	141	137	193	270	242	100	256	191	125	190	197	183	109	0	294	141
1821–22	1231	70	92	92	108	105	125	118	182	320	124	79	150	132	126	155	131	184	115	0	251	139
1822–23	1232	70	110	90	100	203	126	113	183	252	120	79	144	106	127	196	158	142	116	181	235	120
1823–24	1233	70	102	93	97	130	124	134	193	229	114	79	171	129	118	201	167	126	116	159	280	122
1824–25	1234	70	102	92	99	136	128	133	251	290	113	94	198	128	118	241	136	126	117	137	283	124
1825–26	1235	70	102	93	99	137	132	135	195	210	108	92	158	120	118	185	166	124	108	116	240	127
1826–27	1236	70	101	93	97	132	129	123	178	0	110	93	153	121	117	174	161	120	122	115	216	121
1827–28	1237	70 and 105	96	80	94	122	111	113	159	139	155	119	178	116	138	174	170	133	126	131	206	110
1828–29	1238	105	144	108	124	183	164	151	195	141	155	145	200	162	181	231	208	172	164	159	277	136
1829–30	1239	105	139	112	125	170	155	153	220	263	149	143	189	158	171	225	206	168	161	167	243	138
1830–31	1240	105	142	121	125	168	156	153	212	232	147	136	170	153	165	212	204	176	161	168	237	133
1831–32	1241	105	136	120	124	0	146	158	208	230	149	126	169	145	201	218	188	159	162	134	244	134
1832–63	1242	105	161	124	120	162	149	154	231	297	149	125	168	144	208	213	205	167	156	130	241	135
1833–34	1243	105	158	119	117	162	147	169	276	346	146	125	203	145	195	230	208	163	151	141	228	133
1834–35	1244	105	174	123	120	162	153	152	216	289	140	125	173	147	194	196	211	164	153	104	211	134
1835–36	1245	105	173	122	136	162	143	152	211	263	132	125	152	141	176	178	200	0	150	139	236	132
1836–37	1246	105	159	120	125	0	140	150	192	257	136	125	158	140	189	195	184	162	147	137	229	136
1837–38	1247	105	160	119	125	120	140	149	203	248	151	125	194	147	190	226	188	170	147	140	235	133
1838–39	1248	105	167	118	119	120	138	150	222	276	153	125	189	145	153	216	180	163	147	138	223	134
1839–40	1249	105	161	123	140	117	136	150	225	278	149	125	188	168	153	212	179	167	142	137	228	135
1840–41	1250	105	157	120	125	120	137	147	212	244	146	125	172	147	152	209	176	152	144	138	218	132
1841–42	1251	105	157	120	126	120	135	150	198	233	150	132	174	146	152	199	174	153	144	138	213	130
1842–43	1252	105	158	119	126	120	136	150	203	230	148	125	176	143	156	203	176	150	143	134	218	130
1843–44	1853	105 and 180	182	146	154	140	163	178	227	257	176	124	210	161	176	224	200	175	161	162	246	145
1844–45	1254	180 and 120	174	158	148	166	155	166	242	275	169	0	204	164	169	219	202	174	157	188	266	162
1845–46	1255	120	172	139	134	150	154	176	219	284	156	154	193	157	166	222	191	172	152	179	242	149
1846–47	1256	120	180	139	133	150	156	163	223	268	165	154	220	161	166	245	190	174	155	185	267	151
1847–48	1257	120	177	141	136	150	155	159	221	267	164	154	218	162	167	242	202	190	160	175	258	154
1848–49	1258	120	179	139	135	150	156	159	215	262	155	154	151	162	167	218	186	180	155	173	226	148
1849–50	1259	120	162	137	135	150	155	159	207	255	157	154	153	159	162	213	185	173	154	172	227	146
1850–51	1260	120	156	137	137	150	158	159	218	251	159	167	152	157	164	219	128	171	153	171	234	145
1851–52	1261	120	164	141	133	150	154	161	213	251	168	167	168	163	150	222	179	155	154	170	226	145
1852–53	1262	120	174	150	135	159	151	162	223	251	163	172	156	165	143	212	170	157	159	177	211	146

FINIS.

ADDENDA AND ERRATA.

Page	5	last line, *for* "preserved" *read* "reserved."
,,	5	Note 2, *for* "the Carnatic" *read* "that Country."
,,	6	7th line, *for* "of manufacture" *read* "of the manufacture."
,,	6	9th line *for* "special" *read* "Special."
,,	6	4th last line, *for* "paid money" *read* "paid in money."
,,	8	8th last line, *for* "or Pagodas 28," *read* "making a total of Pagodas 28."
,,	20	3d last line, *for* "Evaporation" *read* "evaporation."
,,	24	18th line, *for* "(for new pans)" *read* "(not new pans)."
,,	25	4th line, *after the words* "are at liberty" *add* "on paying a duty of 12 annas the Maund."
,,	35	last line, *for* "put on board" *read* "put it on board."
,,	36	6th last line, *after* "sell in the same," *add* "district in which it is bought."
,,	39	1st Note, 2d line, *for* "shipped" *read* "supplied."
,,	53	4th Note, last line, *for* "per maund" *read* "per 10 maunds."
,,	123	18th line, *for* "Neelva" *read* "Neectwa."